



Borough of Macclesfield.



REPORT

ON THE

Health of Macclesfield,

FOR THE YEAR 1903.

BY

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MACCLESFIELD :

CLAYE, BROWN AND CLAYE, PRINTERS, "COURIER" WORKS,

—
1904.



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ANNUAL REPORT

OF

The Medical Officer of Health

For the Year ending December 31st, 1903.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS
OF THE BOROUGH OF MACCLESFIELD.

MR. MAYOR AND GENTLEMEN,

I have the honour to submit for your consideration my Fifth Annual Report on the Health and Sanitary Administration of the Borough of Macclesfield.

THE GEOLOGY OF THE BOROUGH.

The nature of the soil on which our dwellings are built is a matter of great importance, and much that has been attributed to climate is really due to the soil of the locality rather than to the climate.

Healthy soils are those which are dry and permeable, or which have such a slope as to render drainage easy. All soils contain more or less air which is frequently impure, hence the inadvisability of occupying dwellings below the ground level or situated immediately on its surface.

The soil of the Borough is variable, to the west and north-west, sand and gravel lying on boulder clay alternate, the sand predominating. In the centre of the Town there are several feet, 2 to 5, of coarse gravel on clay. On the east side there is brick-clay on sand and gravel, and to the south boulder clay.

The substratum is new red-sandstone. The most unhealthy soil is "made" soil, particularly those so often formed in towns and their immediate outskirts from rubbish of all sorts.

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ELEVATION.

The elevation of the Town varies between 400 and 500 feet above sea level.

POPULATION.

Whilst this Report was being prepared, I received a communication from the Town Clerk for the Borough calling my attention to certain corrections which had been made in the figures for the population at the 1901 Census. It appears that the population should be 34,624, instead of 34,635, and that 10 must be subtracted from the West Macclesfield returns and 1 from the Sutton portion of the Borough.

The corrected figures will therefore stand as follows:—

Census 1901.

Population of West Macclesfield	17,297
„ „ East Macclesfield	12,440
„ „ Sutton	4,887
Total population of Borough	<u>34,624</u>

ACREAGE.

The area of the Borough in acres was found to be 3,214, instead of 3,231.

VITAL STATISTICS.

The outstanding figures relating to the year 1903 are as follows:—

Estimated population, 34,624.

Births—Males	439
Females	431
	<u>870</u>
Annual rate of Birth per 1,000 of population...	25.1
Deaths	601
Annual rate of Mortality per 1,000 of population	17.3
Deaths under 1 year of age per 1,000 born	134
Excess of registered births over deaths	269

It is noteworthy that the general death rate has increased by 2.2 per 1,000 as compared with last year's rate, and that there is a marked increase in the infantile mortality rate from 102 per 1,000 births in 1902 to 134 in 1903.

BIRTHS.

The following table shows the number of births registered in the Borough during the year 1903 :—

Districts.	Boys.		Girls.		Total.
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	
West	179	...	18	...	399
East	166	...	9	...	357
Sutton	63	...	4	...	114
	408	...	31	...	870

This year's returns show a marked improvement in the Birth rate. Last year it stood at 21.4 per 1,000 of population.

Birth rate per 1,000 of population	25.1
„ „ for England and Wales, 1903	28.4
„ „ „ Rural England and Wales, 1903..	27.3
„ „ „ 76 Great Towns, 1903	29.7
„ „ „ 103 Smaller Towns, 1903	27.4

Thus, although there is a much-needed improvement in our birth rate, it is still much below that of the country generally, and I can only repeat what I have said in several previous reports, that I attribute this state of affairs to the lack of employment of able-bodied males, and their consequent inability to marry and settle in the town.

However, this decrease in the birth rate is not a purely local phenomenon, though more marked in this town. There is a marked reduction in the birth rate of the country generally.

Dr. Niven, the Medical Officer of Health for Manchester, in his Annual Report for 1902, when commenting on this fact, remarks: "It can scarcely be due to any other cause than restriction of reproduction in some way or other. The question is beset with difficul-

ties. It may be said, generally, I think, that while it is permissible for medical men to indicate the means of restricting production, where it is impossible to maintain the young family, or where the health of the mother is undermined, nothing but harm is to be expected from the general adoption of artificial means. The result will probably be the selection of an inferior population and a failure to respond to the call for increase in population when the demand is urgent."

DISTRICT BIRTH RATE.

District.	Population.	1903.	1902.
West Macclesfield	16,500	24.1	21.2
East Macclesfield	12,440	28.6	24.0
Sutton	4,887	23.3	18.8

The population for West Macclesfield is approximately correct, a deduction having been made for the inmates of the Workhouse and Asylum.

NUMBER OF BIRTHS DURING THE LAST 15 YEARS.

Year.	West Macclesfield.	East Macclesfield. and Hurdsfield.	Sutton.
1899	432	406	146
1890	462	374	177
1891	374	177	158
1892	437	408	144
1893	427	372	136
1894	471	380	166
1895	433	350	112
1896	441	374	149
1897	472	378	127
1898	422	383	148
1899	417	341	128
1900	429	305	119
1901	365	283	123
1902	350	300	92
1903	399	357	114

ILLEGITIMATE BIRTH RATE.

The illegitimate birth rate for the year is 1.5 per 1,000 of population, or 6.2 per cent of births registered, as against 6.3 per cent. for last year, and 7 in 1901.

Dr. Newsholme remarks in "Vital Statistics: "The number of illegitimate births per 1,000 of population has varied from a maximum of 2.3 in 1850-52 and in 1863-64, to a minimum of 1.3 in each of the years 1890-95.

DISTRICT ILLEGITIMATE BIRTH RATE.

The percentage of illegitimate births to total number of births registered has been as follows:—

	1903.		1902.
West Macclesfield	8	.....	7.1
East Macclesfield	4	.....	5.6
Sutton	5	.....	5.4

The rate has increased out of proportion to the increase in the legitimate birth rate in West Macclesfield, and in that district is much above the average.

The high death rate amongst these illegitimate children is to a considerable extent due to the fact that in many cases the burden of expense incidental to the birth of the child and to its subsequent maintenance is borne principally by the mother, with the result that the child is put out to nurse, and is thus deprived of maternal care. Our Legislature would do well to follow the example of New South Wales, where a law is enacted which provides that a mother may take legal action against the father of her prospective child before its birth, and also makes it possible for the Court to compel the payment of the expenses incidental to the child's birth, and for the maintenance of the mother for one month before confinement and for six months after, and also for the maintenance of the child.

DEATHS.

	Per 1,000 Inhabitants.
Death rate for the Borough for 1903	17.3
" " " England and Wales for 1903	15.4
" " " Rural England and Wales for 1903	14.8
" " " 76 Great Towns for 1903	16.3
" " " 103 Smaller Towns for 1903	14.6
" " " the Borough in 1902	15.1

The increase in the Borough's death rate is not satisfactory, and we do not compare well with the 103 smaller towns amongst which we rank.

The increase is largely due to the greater number of deaths of infants under one year of age, and this, notwithstanding the phenomenally wet summer, which was associated with atmospheric conditions unfavourable to putrefaction in milk.

675 deaths have been registered during the year; this number includes the deaths of 74 people not belonging to the Borough, most of whom have died in one or other of our Public Institutions, viz., 53 in the Asylum, 11 in the Workhouse, 4 in the Infirmary, and 6 in the West Macclesfield district.

Deducting these we have a total number of deaths of inhabitants of the Borough of 601, which corresponds to a death rate of 17.3 per 1,000 of inhabitants.

TABLE SHOWING DEATHS RATES SINCE 1874.

Years.	Death rate.	Years.	Death rate.	Years.	Death rate.
1874	26.6	1884	22.0	1894	17.7
1875	25.0	1885	20.4	1895	22.5
1876	28.1	1886	20.0	1896	20.0
1877	20.2	1887	23.8	1897	20.3
1878	23.8	1888	18.3	1898	18.5
1879	23.2	1889	21.0	1899	20.4
1880	21.7	1890	21.9	1900	19.6
1881	23.6	1891	20.8	1901	18.5
1882	23.0	1892	25.1	1902	15.1
1883	23.6	1893	20.6	1903	17.3

PRINCIPAL DEATH RATES.

	Per 1,000 of Population.		
	1903.		1902.
Zymotic (seven principal Zymotic Diseases)	0.9	...	0.3
Phthisis	1.2	...	1.5
Other forms of Tuberculosis	0.5	...	0.5
Respiratory (Bronchitis, Pneumonia, etc.)	2.1	...	1.9
Infantile (per 1,000 births under 1 years of age).....	134	...	102
Cancer (Carcinoma and Sarcoma)	1.0	...	0.8

The Zymotic, Respiratory, Infantile, and Cancer death rates all show distinct increase. The Zymotic death rate is trebled. The increase in the Respiratory death rate is, I am of opinion, due to the cold, wet summer and autumn.

The next two tables are of much interest, showing in detail the comparative mortality at age periods during the years 1903 and 1902 respectively.

CAUSES OF DEATHS IN MACCLESFIELD.

Table showing causes of death and the age period at which such deaths have occurred during the year ending December 31st, 1903 :—

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Smallpox	1 ...	...	...	...	1 ...	...	2
Scarlatina .....	...	4 ...	5 ...	...	...	...	9
Diphtheria .....	...	2 ...	1 ...	...	...	...	3
Typhoid Fever .....	...	...	...	1 ...	2 ...	...	3
Influenza .....	...	...	1 ...	1 ...	1 ...	3 ...	6
Puerperal Fever .....	...	...	...	...	1 ...	...	1
Erysipelas	1 ...	...	...	...	1 ...	...	2
Other Septic Diseases..	2 ...	...	1 ...	...	2 ...	2 ...	7
Whooping Cough.....	...	1 ...	...	...	...	...	1
Diarrhœa	11 ...	3 ...	...	...	...	1 ...	15
Enteritis	1 ...	1 ...	...	1 ...	...	...	3
Rheumatic Fever .....	...	...	1 ...	...	1 ...	...	2
Bright's Disease .....	...	1 ...	...	1 ...	14 ...	10 ...	26
Pulmonary Tubercu- losis .....	...	...	2 ...	10 ...	27 ...	3 ...	42
Bronchitis	13 ...	3 ...	1 ...	1 ...	7 ...	17 ...	42
Pneumonia	7 ...	4 ...	3 ...	...	12 ...	2 ...	28
Other Respiratory Diseases .....	...	1 ...	...	...	1 ...	2 ...	4
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	9 ...	1 ...	10
Heart Disease .....	...	1 ...	1 ...	3 ...	43 ...	27 ...	75
Suicide .....	...	...	...	...	2 ...	1 ...	3
Injuries	1 ...	2 ...	3 ...	...	...	1 ...	7
Venereal Diseases.....	12 ...	...	...	...	1 ...	...	13
Cancer .....	...	1 ...	...	1 ...	24 ...	10 ...	36
Convulsions	17 ...	3 ...	...	...	1 ...	...	21
Apoplexy .....	...	...	...	...	14 ...	17 ...	31
Insanity .....	...	...	...	...	10 ...	3 ...	13
Other Brain Diseases	2 ...	...	1 ...	...	4 ...	2 ...	9
Diseases & Accidents of Parturition .....	...	...	...	1 ...	3 ...	...	4
Premature Birth	22 ...	...	...	...	...	...	22
Marasmus	9 ...	...	...	...	...	...	9
Atrophy (Senile) .....	...	...	...	...	3 ...	94 ...	97
Tabes Mesenterica	3 ...	...	1 ...	1 ...	1 ...	...	6
Tubercular Meningitis	1 ...	4 ...	...	...	...	...	5
Tuberculosis	3 ...	...	3 ...	...	1 ...	...	7
All other diseases	11 ...	1 ...	...	3 ...	15 ...	7 ...	37
Totals.....	117	32	24	24	201	203	601

CAUSES OF DEATH IN MACCLESFIELD.

Table showing causes of death and the age periods at which such deaths have occurred during the year 1902:—

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	...	1	...	...	...	1
Membranous Croup ...	...	1	...	...	...	...	1
Typhoid Fever .....	...	...	...	1	2	...	3
Influenza .....	...	...	...	...	4	2	6
Puerperal Fever .....	...	...	...	...	3	...	3
Other Septic Diseases	...	...	...	...	1	...	1
Measles	1	1	...	...	...	...	2
Whooping Cough	1	...	...	...	...	...	1
Diarrhœa .....	...	1	...	...	1	1	3
Enteritis	6	2	...	...	1	...	9
Rheumatic Fever .....	...	...	2	...	1	...	3
Bright's Disease .....	...	...	...	1	17	7	25
Pulmonary Tubercu- losis	1	2	3	11	34	2	53
Bronchitis	9	4	1	...	16	13	43
Pneumonia	6	3	1	1	7	3	21
Other Respiratory Diseases .....	...	...	...	...	2	1	3
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	7	...	7
Heart Disease .....	...	...	...	1	38	28	67
Suicide .....	...	...	...	...	2	1	3
Injuries .....	...	2	2	...	2	1	7
Venereal Diseases	7	...	...	...	2	...	9
Cancer .....	...	...	...	1	17	11	29
Convulsions	11	4	...	1	2	...	18
Apoplexy .....	...	...	...	1	15	17	33
Insanity .....	...	...	...	...	4	3	7
Other Brain Diseases	1	2	...	...	3	3	9
Premature Birth	15	...	...	...	...	...	15
Marasmus	8	1	...	...	...	...	9
Atrophy (Senile) .....	...	...	...	...	2	70	72
Tabes Mesenterica	1	...	...	...	1	...	2
Tubercular Meningitis	4	...	1	...	...	...	5
Tuberculosis	2	4	2	...	2	1	11
All other diseases	3	3	2	1	23	12	44
Total.....	76	30	15	19	209	176	525

A consideration of these two tables of mortality for 1903 and 1902 shows that—

Scarlet Fever accounted for an increase of 8 on the previous year's returns. Smallpox caused two deaths.

Diarrhoea shows an increase of 12. This preventable disease will continue to take its annual toll of young life so long as we tolerate the abominable privy-midden system in our midst, and the same remark applies to Typhoid Fever, which latter disease again claims 3 lives.

The number of deaths from Pulmonary Tuberculosis (Phthisis) is slightly lower, though still much too high. This is another of the preventable diseases which it is the duty of the Corporation to deal very closely with.

The deaths certified as being due to Alcoholism or Cirrhosis of the Liver have shown a steady increase during the last three years.

Cancer yearly claims an increasing number of victims. The question of the increase of Cancer is one that is earnestly engaging the attention of scientific men, but up to the present there is little knowledge of its etiology.

Diseases of the Nervous System have shown a steady increase.

Two deaths occurring in East Macclesfield in infants of 6 and 8 months of age respectively were certified by a registered medical practitioner as being due to "Febricula."

UNCERTIFIED DEATHS.

Two deaths were returned to me as being uncertified. Both occurred in East Macclesfield :—

- (1) Male, aged 28. Death attributed to Heart Disease and Bronchitis.
- (2) Male, aged over 65. Death attributed to "probably Senile Decay."

Last year no deaths were returned uncertified.

QUARTERLY DEATH RETURNS.

	Death rate per 1,000 of Population.		
	1903.		1902.
Quarter ending March 31st	16.6	...	15.5
Quarter ending June 30th	18.7	...	18.3
Quarter ending September 30th	16.5	...	13.0
Quarter ending December 31st.....	17.6	...	13.7

It will be noted that the increase is mainly during the last two quarters of the year, and is attributable to the higher infantile mortality and respiratory death rates.

DETAILED TABLES OF QUARTERLY DEATH
RETURNS.

The next series of twelve tables show the mortality returns distributed to the quarters of the year in the three Registration Districts and classified in age periods.

DEATHS IN WEST MACCLESFIELD.

Quarter ending March 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	2	1	...	...	...	3
Erysipelas	1	...	...	...	...	...	1
Other Septic Diseases	1	...	...	...	...	...	1
Enteritis .....	...	...	...	1	...	...	1
Rheumatic Fever .....	...	...	1	...	...	...	1
Bright's Disease .....	...	...	...	...	1	1	2
Pulmonary Tubercu- losis .....	...	...	...	1	4	1	6
Bronchitis .....	...	2	...	...	1	...	3
Pneumonia	1	...	1	...	2	...	4
Heart Disease .....	...	...	...	...	5	4	9
Cancer .....	...	...	...	...	8	...	8
Convulsions	2	1	...	...	...	...	3
Apoplexy .....	...	...	...	...	2	5	7
Insanitary .....	...	...	...	...	4	...	4
Other Brain Diseases..	...	...	...	...	1	1	2
Premature Birth	2	...	...	...	...	...	2
Atrophy (Senile) .....	...	...	...	...	...	16	16
Tuberculosis	1	...	...	2	...	1	4
Totals.....	8	5	3	6	28	29	79

DEATHS IN WEST MACCLESFIELD.

Quarter ending June 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	2	...	2	...	...	4
Puerperal Fever .....	...	...	...	...	1	...	1
Other Septic Diseases..	...	...	...	...	2	1	3
Bright's Disease .....	...	...	...	1	1	...	2
Pulmonary Tubercu- losis .....	...	...	...	...	5	...	5
Bronchitis	1	...	...	...	3	2	6
Pneumonia .....	...	1	...	1	...	1	3
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	1	...	1
Heart Disease .....	...	...	...	...	6	4	10
Injuries .....	...	...	2	...	...	...	2
Venereal Diseases	2	...	...	...	...	...	2
Cancer .....	...	...	...	...	2	2	4
Convulsions	2	...	...	...	...	...	2
Apoplexy .....	...	...	...	...	1	1	2
Insanity .....	...	...	...	...	1	...	1
Diseases & Accidents of Parturition .....	...	...	...	1	1	...	2
Premature Birth	5	...	...	...	...	...	5
Marasmus	4	...	...	...	...	...	4
Atrophy (Senile) .....	...	...	...	...	2	14	16
Tuberculosis	1	...	...	...	...	...	1
All other diseases .....	...	...	...	1	4	2	7
Totals.....	15	3	5	3	31	26	83

DEATHS IN WEST MACCLESFIELD.

Quarter ending September 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Influenza .....	...	...	...	1	...	1	2
Diarrhoea	3	1	...	...	...	...	4
Bright's Disease .....	...	...	...	...	4	2	6
Pulmonary Tubercu- losis .....	...	...	...	1	3	1	5
Bronchitis	1	...	...	...	...	2	3
Pneumonia .....	...	1	...	...	1	1	3
Other Respiratory Diseases .....	...	...	...	...	1	...	1
Heart Disease .....	...	...	...	1	9	3	13
Suicide .....	...	...	...	...	1	1	2
Cancer .....	...	...	...	...	4	1	5
Convulsions	2	...	...	...	1	...	3
Apoplexy .....	...	...	...	...	...	1	1
Other Brain Diseases..	...	...	1	...	...	...	1
Diseases & Accidents of Parturition .....	...	...	...	...	1	...	1
Marasmus	1	...	...	...	...	...	1
Atrophy (Senile) .....	...	...	...	...	...	15	15
Tabes Mesenterica	1	...	...	...	...	...	1
All other diseases .....	...	...	...	...	5	...	5
Totals.....	8	2	1	3	30	28	72

DEATHS IN WEST MACCLESFIELD.

Quarter ending December 31st, 1903.

Diseases.	Under				Over			Total.
	1 year.	1-5.	5-15.	15-25.	25-65.	65.		
Typhoid Fever .....	...	...	...	1	...	1	...	2
Other Septic Diseases	1	...	...	...	...	...	...	1
Rheumatic Fever .....	...	...	...	...	1	...	...	1
Bright's Disease .....	...	...	...	...	2	...	...	2
Pulmonary Tubercu- losis .....	...	...	...	1	4	...	...	5
Bronchitis	1	1	...	...	...	...	...	2
Pneumonia	1	...	...	...	1	...	...	2
Other Respiratory Diseases .....	...	...	...	...	...	1	...	1
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	3	...	...	3
Heart Disease .....	...	...	...	...	5	3	...	8
Suicide .....	...	...	...	...	1	...	...	1
Venereal Diseases	2	...	...	...	1	...	...	3
Cancer .....	...	...	...	...	3	3	...	6
Convulsions	1	...	...	...	...	...	...	1
Apoplexy .....	...	...	...	...	3	4	...	7
Insanity .....	...	...	...	...	1	3	...	4
Other Brain Diseases..	1	...	...	...	1	1	...	3
Premature Birth	3	...	...	...	...	...	...	3
Marasmus	1	...	...	...	...	...	...	1
Atrophy (Senile) .....	...	...	...	...	1	11	...	12
Tubercular Meningitis	...	1	...	...	...	...	...	1
All other diseases	2	...	...	...	...	2	...	4
Totals.....	13	2	...	2	28	28	...	73

DEATHS IN EAST MACCLESFIELD.

Quarter ending March 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	...	1	...	...	...	1
Diphtheria .....	...	...	1	...	...	...	1
Erysipelas .....	...	...	...	...	1	...	1
Diarrhœa .....	...	1	...	...	...	...	1
Enteritis	1	...	...	...	...	...	1
Bright's Disease .....	...	1	...	...	2	1	4
Pulmonary Tubercu- losis .....	...	...	2	...	1	...	3
Bronchitis	3	...	...	...	...	3	6
Pneumonia .....	...	1	...	...	2	...	3
Other Respiratory Diseases .....	...	1	...	...	...	...	1
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	1	...	1
Heart Disease .....	...	...	...	...	4	4	8
Venereal Diseases	2	...	...	...	...	...	2
Cancer .....	...	...	...	...	1	1	2
Convulsions	1	...	...	...	...	...	1
Apoplexy .....	...	...	...	...	3	...	3
Premature Birth	2	...	...	...	...	...	2
Atrophy (Senile) .....	...	...	...	...	...	9	9
Tabes Mesenterica ....	...	...	...	1	...	...	1
All other Diseases	1	...	...	...	1	1	3
Totals.....	10	4	4	1	16	19	54

DEATHS IN EAST MACCLESFIELD.

Quarter ending June 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Smallpox	1 ...	...	...	...	1 ...	...	2
Scarlatina .....	...	...	1 ...	...	...	...	1
Whooping Cough .....	...	1 ...	...	...	...	...	1
Diarrhœa .....	...	...	...	...	...	1 ...	1
Bright's Disease .....	...	...	...	...	...	3 ...	3
Pulmonary Tubercu- losis .....	...	...	...	...	1 ...	...	1
Bronchitis	3 ...	...	...	1 ...	1 ...	4 ...	9
Pneumonia	2 ...	1 ...	...	...	3 ...	1 ...	7
Other Respiratory Diseases .....	...	...	...	...	...	1 ...	1
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	2 ...	...	2
Heart Disease .....	...	...	...	1 ...	4 ...	2 ...	7
Venereal Diseases	2 ...	...	...	...	...	...	2
Cancer .....	...	1 ...	...	...	1 ...	1 ...	3
Convulsions	3 ...	...	...	...	...	...	3
Apoplexy .....	...	...	...	...	2 ...	1 ...	3
Other Brain Diseases..	1 ...	...	...	...	2 ...	1 ...	3
Diseases & Accidents of Parturition .....	...	...	...	...	1 ...	...	1
Premature Birth	1 ...	...	...	...	...	...	1
Atrophy (Senile) .....	...	...	...	...	...	4 ...	4
Tuberculosis	1 ...	...	1 ...	...	...	...	2
All other diseases	4 ...	...	...	...	2 ...	...	6
Totals.....	18 ...	3 ...	2 ...	2 ...	20 ...	18 ...	63

DEATHS IN EAST MACCLESFIELD.

Quarter ending September 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Diphtheria .....	...	1	...	...	...	...	1
Influenza .....	...	...	...	...	...	1	1
Other Septic Diseases	...	...	1	...	...	1	2
Diarrhœa	3	1	...	...	...	...	4
Bright's Disease .....	...	...	...	...	1	...	1
Pulmonary Tubercu- losis .....	...	...	...	3	3	...	6
Bronchitis .....	...	...	...	...	1	1	2
Pneumonia .....	...	...	...	...	1	...	1
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	1	...	1
Heart Disease .....	...	1	1	...	5	2	9
Venereal Diseases	2	...	...	...	...	...	2
Cancer .....	...	...	...	...	3	1	4
Convulsions	5	1	...	...	...	...	6
Apoplexy .....	...	...	...	...	2	1	3
Insanity .....	...	...	...	...	1	...	1
Premature Birth	3	...	...	...	...	...	3
Marasmus	1	...	...	...	...	...	1
Atrophy (Senile) .....	...	...	...	...	...	4	4
Tabes Mesenterica	1	...	...	...	1	...	2
All other diseases .....	...	...	...	...	1	...	1
Totals.....	15	4	2	3	20	11	55

DEATHS IN EAST MACCLESFIELD.

Quarter ending December 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Under 65.	Total.
Diphtheria .....	...	1	...	...	...	...	1
Typhoid Fever .....	...	...	...	...	1	...	1
Influenza .....	...	...	1	...	...	1	2
Diarrhœa	4	...	...	...	...	...	4
Enteritis .....	...	1	...	...	...	...	1
Bright's Disease .....	...	...	...	...	2	...	2
Pulmonary Tubercu- losis .....	...	...	...	3	2	1	6
Bronchitis	3	...	1	...	...	4	8
Pneumonia	1	...	...	...	1	...	2
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	1	...	1
Heart Disease .....	...	...	...	1	3	3	7
Injuries .....	...	2	1	...	...	...	3
Venereal Diseases	1	...	...	...	...	...	1
Cancer .....	...	...	...	...	1	...	1
Convulsions	1	...	...	...	...	...	1
Apoplexy .....	...	...	...	...	...	3	3
Insanity .....	...	...	...	...	1	...	1
Premature Birth	1	...	...	...	...	...	1
Marasmus	2	...	...	...	...	...	2
Atrophy (Senile) .....	...	...	...	...	...	13	13
Tabes Mesenterica	1	...	...	...	...	...	1
Tubercular Meningitis	1	1	...	...	...	...	2
All other diseases	3	1	...	...	...	...	4
Totals.....	18	6	3	4	12	25	68

DEATHS IN SUTTON.

Quarter ending March 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Bright's Disease	1	1
Pulmonary Tubercu- losis	1	1	...	2
Pneumonia	1	...	...	...	1
Heart Disease	1	...	1
Injuries	1	...	...	...	...	...	1
Apoplexy	1	1	2
Insanity	1	...	1
Atrophy (Senile)	1	1
Tuberculosis	1	...	...	...	1
Totals.....	1	...	2	1	4	3	11

DEATHS IN SUTTON.

Quarter ending June 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Bright's Disease .....	...	...	...	...	...	1	1
Pulmonary Tubercu- losis .....	...	...	...	...	2	...	2
Bronchitis	1	...	...	...	...	...	1
Pneumonia	2	...	...	...	...	...	2
Heart Disease .....	...	...	...	...	...	1	1
Injuries .....	...	...	...	...	...	1	1
Cancer .....	...	...	...	...	1	...	1
Premature Birth	2	...	...	...	...	...	2
Atrophy (Senile) .....	...	...	...	...	...	2	2
Tubercular Meningitis	...	1	...	...	...	...	1
Tuberculosis .....	...	1	...	...	...	...	1
Totals.....	5	2	...	...	3	5	15

DEATHS IN SUTTON.

Quarter ending September 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Diarrhœa	1 ...	...	...	...	...	...	1
Pulmonary Tubercu- losis .....	...	...	...	...	1 ...	...	1
Heart Disease .....	...	...	...	...	1 ...	...	1
Venereal Diseases	1 ...	...	...	...	...	...	1
Cancer .....	...	...	...	...	...	1 ...	1
Convulsions .....	...	1 ...	...	...	...	...	1
Insanity .....	...	...	...	...	1 ...	...	1
Premature Birth	1 ...	...	...	...	...	...	1
Atrophy (Senile) .....	...	...	...	...	...	4 ...	4
Tuberculosis .....	...	...	...	...	1 ...	...	1
All other diseases .....	...	...	...	...	2 ...	1 ...	3
Totals.....	3 ...	1 ...	...	...	6 ...	6 ...	16

DEATHS IN SUTTON.

Quarter ending December 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Influenza	1 ...	...	1
Bright's Disease	1 ...	1 ...	2
Bronchitis	1 ...	1 ...	2
Heart Disease	1 ...	1
Cancer	1 ...	...	...	1
Premature Birth	2 ...	...	...	...	...	...	2
Atrophy (Senile)	1 ...	1
Tabes Mesenterica	1 ...	...	...	...	1
Tubercular Meningitis	1 ...	...	...	...	...	1
Totals.....	2 ...	1 ...	1 ...	1 ...	3 ...	4 ...	12

DISTRICT MORTALITY.

In considering District Mortality we must bear in mind that many persons die in West Macclesfield from diseases contracted in either East Macclesfield or Sutton. This arises from the fact that all the Public Institutions for the reception of sick and infirm people are situated in West Macclesfield. With the valuable help of the Registrar of Deaths for West Macclesfield, I am enabled to properly distribute these deaths to the several districts to which they originally belonged, and thus prevent the death rate of West Macclesfield being unduly raised, to the advantage of the remaining districts.

PRINCIPAL DISTRICT MORTALITY RATES.

Year 1903.

Macclesfield	Death rate per 1,000 Inhabitants.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	17.7	0.7	1.5	1.2	0.2	110
East	19.2	1.5	3.0	1.2	0.6	170
Sutton	11.0	0.2	1.2	1.0	1.0	114

Year 1902.

Macclesfield.	Death rate per 1,000 Inhabitants.	Zymotic death rate.	Respiratory death rate.	Phthisis death rate.	Deaths from other forms of Tuberculosis.	Infantile Mortality rate.
West	15.6	0.17	1.0	1.9	0.6	111
East	15.7	0.32	2.4	1.4	0.4	130
Sutton	12.0	0.81	1.4	0.4	0.1	65

A very casual observation and comparison will show how unsatisfactory these figures are. The rates for East Macclesfield are much too high, and should receive the earnest consideration of the Sanitary Authority.

The Infantile Mortality rate for East Macclesfield may without exaggeration be truly described as appalling. One child out of every six born in East Macclesfield died before it reached one year of age!

If this plain, unvarnished fact does not powerfully appeal to all interested in the preservation of child life and the future welfare of the town and its inhabitants, no words of mine will. I sincerely hope that the Sanitary Authority, whose duty it is to deal with this grave question, will take active steps to stem this terrible loss of child life. I shall discuss this matter in detail later when considering Infantile Mortality.

The Respiratory death rates, which includes deaths from Bronchitis, Pneumonia (croupous and catarrhal), etc., shows a marked increase, which may in some measure be attributed to the cold, wet summer.

People living in damp, badly-ventilated houses are specially liable to attack from lung diseases and to the various ailments associated with the name Rheumatism. The importance of securing freedom from damp, foul air in dwelling-houses is hardly realised, and to secure this freedom it is not only necessary that efficient damp courses should be laid in the foundations, but also that the whole site occupied by the house should, according to the Bye-laws, be covered by at least six inches of concrete well rammed down. This will effectually prevent the damp air rising into the house.

The next three tables clearly show the causes in detail of the mortality in the three Registration Districts into which Macclesfield is divided.

CAUSES OF DEATHS IN WEST MACCLESFIELD

For the Year ending December 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	4	...	3	...	...	7
Typhoid Fever .....	...	...	...	1	...	1	2
Influenza .....	...	...	...	1	...	1	2
Puerperal Fever .....	...	...	...	...	1	...	1
Erysipelas	1	...	...	...	...	...	1
Other Septic Diseases	2	...	...	...	2	1	5
Diarrhoea	3	1	...	...	...	...	4
Enteritis .....	...	...	...	1	...	...	1
Rheumatic Fever .....	...	...	1	...	1	...	2
Bright's Disease .....	...	...	...	1	8	3	12
Pulmonary Tubercu- losis .....	...	...	...	3	16	2	21
Bronchitis	3	3	...	...	4	4	14
Pneumonia	2	2	2	...	5	1	12
Other Respiratory Diseases .....	...	...	...	...	1	1	2
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	4	...	4
Heart Disease .....	...	...	...	1	25	14	40
Suicide .....	...	...	...	...	2	1	3
Injuries .....	...	...	2	...	...	...	2
Venereal Diseases	4	...	...	...	1	...	5
Cancer .....	...	...	...	...	17	6	23
Convulsions	7	1	...	...	1	...	9
Apoplexy .....	...	...	...	...	6	11	17
Insanity .....	...	...	...	...	6	3	9
Other Brain Diseases	1	...	1	...	2	2	6
Diseases & Accidents of Parturition .....	...	...	...	1	2	...	3
Premature Birth	10	...	...	...	...	...	10
Marasmus	6	...	...	...	...	...	6
Atrophy (Senile) .....	...	...	...	...	3	56	59
Tabes Mesenterica	1	...	...	...	...	...	1
Tubercular Meningitis	...	1	...	...	...	...	1
Tuberculosis	1	...	2	...	...	...	3
All other diseases	3	...	...	3	9	5	20
Totals.....	44	12	11	12	117	111	307

CAUSES OF DEATHS IN EAST MACCLESFIELD

For the Year ending December 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Smallpox	1	...	...	...	1	...	2
Scarlatina .....	...	...	2	...	...	...	2
Diphtheria .....	...	2	1	...	...	...	3
Typhoid Fever .....	...	...	...	...	1	...	1
Influenza .....	...	...	1	...	...	2	3
Erysipelas .....	...	...	...	...	1	...	1
Other Septic Diseases	...	...	1	...	...	1	2
Whooping Cough .....	...	1	...	...	...	...	1
Diarrhœa	7	2	...	...	...	1	10
Enteritis	1	1	...	...	...	...	2
Bright's Disease .....	...	1	...	...	5	4	10
Pulmonary Tubercu- losis .....	...	...	2	6	7	1	16
Bronchitis	9	...	1	1	2	12	25
Pneumonia	3	2	...	...	7	1	13
Other Respiratory Diseases .....	...	1	...	...	...	1	2
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	5	...	5
Heart Disease .....	...	1	1	2	16	11	31
Injuries .....	...	2	1	...	...	...	3
Venereal Diseases	7	...	...	...	...	...	7
Cancer .....	...	1	...	...	6	3	10
Convulsions	10	1	...	...	...	...	11
Apoplexy .....	...	...	...	...	7	5	12
Insanity .....	...	...	...	...	2	...	2
Other Brain Diseases	1	...	...	...	2	...	3
Diseases & Accidents of Parturition .....	...	...	...	...	1	...	1
Premature Birth	7	...	...	...	...	...	7
Marasmus	3	...	...	...	...	...	3
Atrophy (Senile) .....	...	...	...	...	...	30	30
Tabes Mesenterica	2	...	...	1	1	...	4
Tubercular Meningitis	1	1	...	...	...	...	2
Tuberculosis	1	...	1	...	...	...	2
All other diseases	8	1	...	...	4	1	14
Totals.....	61	17	11	10	68	73	240

CAUSES OF DEATHS IN SUTTON

For the Year ending December 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Influenza .....	...	...	...	...	1	...	1
Diarrhœa	1	...	...	...	...	...	1
Bright's Disease .....	...	...	...	...	1	3	4
Pulmonary Tubercu- losis .....	...	...	...	1	4	...	5
Bronchitis	1	...	...	...	1	1	3
Pneumonia	2	...	1	...	...	...	3
Alcoholism and Cir- rhosis of Liver .....	...	...	...	...	...	1	1
Heart Disease .....	...	...	...	...	2	2	4
Injuries	1	...	...	...	...	1	2
Venereal Diseases	1	...	...	...	...	...	1
Cancer .....	...	...	...	1	1	1	3
Convulsions .....	...	1	...	...	...	...	1
Apoplexy .....	...	...	...	...	1	1	2
Insanity .....	...	...	...	...	2	...	2
Premature Birth	5	...	...	...	...	...	5
Atrophy (Senile) .....	...	...	...	...	...	8	8
Tabes Mesenterica ....	...	...	1	...	...	...	1
Tubercular Meningitis	...	2	...	...	...	...	2
Tuberculosis	1	...	...	...	1	...	2
All other diseases .....	...	...	...	...	2	1	3
Totals.....	12	3	2	2	16	19	54

DEATHS IN PUBLIC INSTITUTIONS.

We have four Public Institutions in the Borough, all situated in the West Macclesfield Registration District. They are the Park-side County Lunatic Asylum, the Workhouse, the Infirmary, and the Borough Isolation and Smallpox Hospitals.

During the year 204 deaths have occurred in one or other of these Institutions, as compared with 178 in the previous year.

68 were of persons who did not belong to Macclesfield.

99 were inhabitants of West Macclesfield.

32 " " " East Macclesfield.

5 " " " Sutton.

Of the 99 death of inhabitants of West Macclesfield,

54 died in the Workhouse.

13 " " " Asylum.

24 " " " Infirmary.

8 " " " Isolation Hospital.

Of the 32 deaths of inhabitants of East Macclesfield,

15 died in the Workhouse.

3 " " " Asylum.

11 " " " Infirmary.

3 " " " Isolation Hospital.

Of the 5 deaths in Sutton,

2 died in the Workhouse.

1 " " " Isolation Hospital.

1 " " " Infirmary.

1 " " " Asylum.

Of the 68 deaths of persons who did not belong to the Borough,

11 died in the Workhouse.

53 " " " Asylum.

4 " " " Infirmary.

DEATHS IN PUBLIC INSTITUTIONS.

Year ending Dec. 31st, 1903.				ISOLATION HOSPITALS.							WORKHOUSE.							INFIRMARY.							ASYLUM.							TOTALS.	
DISEASES.				Under one year							Under 1 year							Under 1 year							Under 1 year							Total Asylum	Total Deaths in Macclesfield Institutions.
				1—5	5—15	15—25	25—65	over 65	Total	1—5	5—15	15—25	25—65	over 65	Total	1—5	5—15	15—25	25—65	over 65	Total	1—5	5—15	15—25	25—65	over 65	Total						
Smallpox	..	...	1	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Scarlatina	...	...	...	...	5	...	4	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	1
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	2
Other Septic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	...	...	...	...	1	...	3	...	...	...	...	5
Diarrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1
Enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	2	...	...	2	...	2	4
Bright's Disease	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	...	...	...	...	3	...	3	...	...	8	7	15	20
Pulmonary Tuberculosis	...	...	...	...	...	...	...	...	...	...	1	...	7	1	8	...	1	...	1	...	2	...	...	...	12	2	14	24
Bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	...	...	2	...	...	...	1	...	1	4
Pneumonia	...	...	...	...	...	...	...	...	...	...	...	1	2	1	4	...	...	...	1	1	...	2	...	...	1	1	2	8
Other Respiratory Diseases	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	1	2	
Alcoholism & Cirrhosis of Liver	..	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	
Heart Disease	...	...	...	...	...	...	...	...	...	...	...	6	5	11	...	...	...	1	2	...	3	...	...	...	5	1	6	20
Suicide	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	1	...	...	...	...	...	...	2
Injuries	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	2	...	1	...	5	...	...	...	...	...	...	6
Venereal Diseases	...	...	...	...	...	...	...	...	...	...	...	1	1	2	2	...	...	...	...	...	2	...	...	...	...	...	...	4
Cancer	...	...	...	...	...	...	...	...	...	...	...	4	2	6	...	...	...	...	2	...	2	...	...	...	2	2	...	10
Convulsions	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	2	...	3	4
Apoplexy	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Insanity...	...	...	...	...	...	...	...	...	...	...	...	1	5	6	...	...	...	...	...	...	...	...	...	19	...	19	25	
Other Brain Diseases	...	...	...	...	...	...	...	...	...	...	...	1	2	3	...	...	1	...	2	...	3	...	...	...	1	...	1	7
Premature Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1
Marasmus	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	2
Atrophy (Senile)	...	...	...	...	...	...	...	...	...	...	...	...	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
Tabes Mesenterica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1
Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	2
All other diseases	...	...	...	...	...	...	...	...	...	...	...	3	1	4	...	...	...	3	...	3	...	...	...	1	...	1	...	8
TOTALS				2	5	4	1	12	1	1	1	4	33	46	83	7	7	3	5	16	1	39	2	55	13	70	204				

INFANTILE MORTALITY.

Total number of deaths under 1 year of age in the	
Borough	117
Death rate per 1,000 children born	134
or 1 child out of every 8 died before it reached	
1 year of age.	

DISTRICT INFANTILE MORTALITY.

West Macclesfield	110	per 1,000 born.
East Macclesfield	170	„ „ „
Sutton	114	„ „ „

In commencing to consider this grave problem of Infant Mortality it is necessary that we should have a standard of measurement, a comparative figure, above which the rate ought not to go.

Some children are born prematurely, some with malformations, some are the offspring of weakly parents, and some will succumb to one or other of the many ailments to which child life is susceptible.

Dr. Hope, the distinguished Medical Officer of Health for Liverpool, after most exhaustively inquiring into this question from all sources, arrived at the conclusion that “an annual death rate amongst infants of 100 per 1,000 is unavoidable,” and consequently everything above that figure is preventable.

It is probable that Dr. Hope's rate is too high, and most Medical Officers of Health are of opinion that about 50 per cent. of infant deaths are preventable.

Examination of the causes to which such infants' deaths are attributed shows that diseases of the digestive and respiratory systems are principally concerned.

	1903.		1902.
Diarrhoea and allied diseases	12	...	6
Convulsions	17	...	11
Marasmus	9	...	8
Tabes Mesenterica	3	...	1
	—		—
	41	...	26
	—		—

LUNG DISEASES.

Bronchitis	13	...	9
Pneumonia	7	...	6
	—		—
	20	...	15
	—		—

The association of digestive and respiratory diseases in young children is very close. Many of the children who survive attack of digestive disorder are left weakly and peculiarly liable to succumb to lung disease with the onset of the colder weather.

QUARTERLY INFANTILE MORTALITY.

- (1) Quarter ending March 31st 19 deaths.
- (2) ,, ,, June 30th 38 ,,
- (3) ,, ,, September 30th 26 ,,
- (4) ,, ,, December 31st 34 ,,

It will be noted that the highest mortality is during the last two quarters of the year.

Diarrhœa and allied diseases are much more prevalent during the warmer portion of the year, when atmospherical conditions favour early putrefactive changes in food, particularly milk, and again the onset of the colder weather attacks through the lungs those left weakened by previous digestive disorders.

In the vast majority of cases the origin of Convulsions in infants is due to the irritation of the stomach and bowels caused by the ingestion of improper food. Teething, etc., form but a predisposing cause, and are rarely or never capable of causing fatal convulsions in a properly-fed, healthy infant.

Many mothers know nothing of the correct way to feed a baby. There is, unfortunately, a widespread idea that a woman knows by instinct how to feed, clothe, rear her children, and "keep house," but a very casual study of infant death statistics will dispel that delusion. "To experience the pangs of child birth, or the further pangs of a baby's funeral, adds nothing to the mother's knowledge of the proper care, clothing, feeding, and teaching the child."

CAUSES OF INFANTILE MORTALITY.

I am well aware that there are some who are disposed to view this loss of child life with indifference, and some THINK, and others bolder SAY, that it is a good thing no more survive.

But a high death rate means a high sickness rate, and that the children who survive grow up stunted with low vitality, a ready prey to any disease, and quite incapable of developing into healthy men and women, or of producing healthy offspring. With physical deterioration there invariably follows a decline in mental and moral stamina, and the foundations of national degeneracy are surely laid in a neglected infant population.

IMPROPER FEEDING.

A child cannot have a better start in life than health during the first few years. A mother's first duty is to endeavour to ensure this blessing for her offspring, and for that purpose she should suckle the child herself for the first six months of life.

It is the bottle-fed baby, deprived of its birth-right of maternal sustenance, who is the principal sufferer from infant ailments, and whose numbers largely swell the infantile mortality rate. Comparatively few breast-fed infants suffer from diarrhœa or other digestive disorders. There seems to be in certain quarters a growing disinclination on the part of mothers to discharge this important duty, into the suggested causes of this disinclination I do not propose to enter. I am, however, inclined to the opinion from personal enquiry and observation that an increasing number of mothers are incapable of suckling their infants for more than a few weeks after birth. Whether such a deplorable state of affairs is to be attributed to the mother's ignorance as to the selection of suitable foods for herself, before and during lactation, or to her desire to return to her employment, or whether it is an indication of racial degeneracy, I am not prepared to offer an opinion. Probably there is an element of truth in all three suggestions. Nevertheless the fact remains that a large proportion of infants are bottle-fed from a few weeks after birth.

INSANITARY SURROUNDINGS.

Whilst improper feeding is largely responsible for this excessive waste of child life, unhealthy homes contribute powerfully to the same evil. Overcrowding, bad drainage, and pollution of the soil and air by filth affect the general death rate, and still more injuriously act on infants and young children.

Towns with a privy-midden system, with back to back houses, with houses whose back yards are not paved and drained, have a high diarrhœa death rate.

I would again urge upon the Sanitary Authority the importance of making a clean sweep of the antiquated custom of storing human excrement and household filth and refuse in pits, euphemistically called ashpits, in close proximity to dwelling houses. Such disgusting practices belong to the middle of the 17th century, and have long since been obsolete, excepting to those whose noses being inured to stench, regretfully miss the old familiar stink.

THE REMEDY.

EDUCATIONAL.

When one contemplates the ignorance which so largely prevails regarding the most elementary laws of health, to say nothing of the more intricate and delicate laws which govern infant life, one wonders what can have been taught in the Elementary Schools of our country for the last thirty years.

A certain amount of educational work can be done amongst the mothers which our Ladies Public Health Society has nobly taken in hand, but education must begin during school life to be of any real and permanent value.

It is the education of the child, and particularly the child of ignorant parents, for which we must strive.

Our new Education Authority has an unique opportunity. Will it avail itself of it? Why should not every boy and girl in the higher standards receive instruction on the necessity for (1) personal and domestic cleanliness; (2) pure air in dwellings; (3) evil effects of bad habits; (4) proper methods of breathing, and attention paid to their physical culture?

Why should not a model workman's cottage be attached to every school, and every boy and girl shown how to keep it sweet and clean, and to cook plain household dishes?

I am of opinion that no girl should be allowed to leave school until she has been practically shown how to wash and dress a baby, and given instruction in the rearing of infants. Cannot the Educational Authority help in this matter?

I believe the true remedy for infantile mortality lies in education.

WHAT IS BEING DONE.

A number of ladies, impressed with the necessity of doing something to check this loss of life, with all its attendant evils, have formed themselves into a Society, called The Macclesfield Ladies' Public Health Society. The Health Committee defray the cost of obtaining the names and addresses of children born in the several districts of Macclesfield. These returns are forwarded by the Registrars to the Medical Officer of Health, and he, in conjunction with the Secretary to the Health Society, allocates the births to certain districts supervised by the members of the Society.

Where it appears likely that instruction and advice on the care of the baby is requisite, the lady makes periodical visits to the house, and keeps a kindly eye on the new arrival.

Much tact and discrimination are needed on the part of the lady visitors, but I am sure that the results will repay them for the time, patience, tact, and skill required in the work. Seldom are the visits resented or considered inquisitorial.

A supply of Maw's boat-shaped feeding bottles with two teats is at the service of those ladies who believe that the parents are too poor to buy a suitable feeding bottle, where it is needed.

A stock of "non-flam" flannellette is kept by the Secretary for the use of ladies who think their infant charges are insufficiently clad. This provision of non-inflammable warm clothing will, I believe tend to reduce the mortality from Bronchitis and Bronchopneumonia amongst the more delicate infants.

Where it appears that the drunken or neglectful habits of the parents imperil the child's life, the valuable services of the National Society for the Prevention of Cruelty to Children is invoked, and where the house is persistently dirty or the surroundings are insanitary, the Public Health Department is informed.

I cannot pass on without expressing my sincere appreciation of the valuable work done in Macclesfield by the National Society for the Prevention of Cruelty to Children in impressing on parents who are drunken or neglectful their legal responsibilities towards the children they have brought into the world.

There are a certain number of the lowest class of women who are incorrigible, but there are many others who will gladly listen to advice from ladies, and will try to carry it into effect; but it is in many cases very difficult to overcome the habits of a lifetime. I trust the time is not far distant when the funds of the Ladies

Health Society will permit of their employing a qualified female sanitary inspector as Lady Health Visitor. The cost is not great, and the work is most valuable.

In conclusion, I wish to insist on the supreme importance of the education of the older school girls in the practice of house cleansing and the management and feeding of infants. Practical demonstrations should be given in the advanced classes in the Day Schools and in the Evening Continuation Schools.

Girls at present tend to seek industrial employment and avoid service. Industrial service does nothing to instruct them in the duties of house-keeping or the care and management of children. The only way to restore the natural order of things is by education. It is of prime importance that a woman should know how to fulfil her first and most important duty—the rearing of children.

DISTRICT INFANTILE MORTALITY TABLE.

Showing rate of mortality among infants under one year of age to 1,000 registered births apportioned to the different districts compared with the corresponding figures for the last fifteen years.

Districts.	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	Average for 10 years	1898	1899	1900	1901	1902	1903
West Macclesfield	118	180	143	136	192	170	110	310	138	152	155	139	223	167	186	111	110
East Macclesfield	171	255	219	161	215	225	137	210	180	187	195	159	167	242	155	103	170
Hurdsfield	87	169	160	127	177	153	156	170									
Sutton	148	212	124	108	235	191	126	212	148	212	167	135	187	142	219	65	114
The whole Borough ...	135	220	172	130	203	190	134	247	155	175	172	174	196	190	180	102	134
76 Great Towns .....	...	...	...	...	...	...	...	...	...	...	...	...	...	173	165	145	144
England	136	144	151	149	148	159	137	161	148	156	161	163	154	154	151	133	132

INQUESTS.

46 Inquests were held during the year :—

27 in West Macclesfield.

15 in East Macclesfield.

4 in Sutton.

VERDICTS.

West Macclesfield.			Sutton.		
Sex.	Age.	Verdict.	Sex.	Age.	Verdict.
(1) M.	32.	Delirium tremens.	(1) F.	68.	Cardiac failure.
(2) M.	50.	Suicide by hanging whilst insane.	(2) F.	70.	Oldema of lungs, following burns.
(3) M.	70.	Paralysis of brain accelerated by injury.	(3) M.	74.	Hæmorrhage on brain due to falling downstairs.
(4) F.	40.	Found dead in bed. Syncope.	(4) F.	5 months.	Accidentally suffocated whilst in bed.
(5) M.	50.	Rupture of blood vessel.	East Macclesfield.		
(6) M.	27.	Suicide by jumping through window whilst insane.	(1) M.	69.	Found dead in bed. Syncope.
(7) F.	57.	Found dead in bed. Syncope.	(2) M.	70.	Found dead in house. Syncope.
(8) M.	54.	Died in street. Syncope.	(3) F.	1 hour.	Inanition. Premature birth.
(9) M.	69.	Suicide by hanging whilst insane.	(4) F.	66.	Found dead in house. Heart disease.
(10) M.	14.	Shock. Caught in shafting.	(5) F.	10 months.	Convulsions. Not sufficient evidence to show cause.
(11) M.	12.	Cellulitis & pneumonia after injury.	(6) M.	55.	Rupture of brain vessel.
(12) M.	74.	Rupture of blood vessel in lungs.	(7) M.	36.	Alcoholic poisoning. Cardiac collapse.
(13) F.	6 months.	Convulsions.	(8) F.	52.	Heart disease.
(14) M.	47.	Found dead in closet.	(9) F.	13.	Syncope, due to over-exertion.
(15) F.	72.	Heart disease.	(10) F.	66.	Syncope.
(16) F.	47.	Apoplexy.			

VERDICTS.—Continued.

West Macclesfield.			East Macclesfield.				
Sex.	Age.	Verdict.	Sex.	Age.	Verdict.		
(17)	F.	74.	Apoplexy.	(11)	F.	11 weeks.	Convulsions
(18)	M.	6 months.	Convulsions.				due to improper
(19)	M.	1½.	Shock. Run over.				food.
(20)	M.	15.	Peritonitis, acce-	(12)	M.	35.	Heart disease.
			lerated by strain.	(13)	M.	3 hours.	Premature
(21)	F.	3.	Shock. Severe				birth.
			burns.	(14)	M.	59.	Syncope.
(22)	F.	59.	Death under	(15)	M.	1 day.	Convulsions.
			chloroform.				
(23)	M.	32.	Double pneumo-				
			nia.				
(24)	M.	46.	Suicide by cutting				
			throat whilst in-				
			sane.				
(25)	M.	45.	Double pneumo-				
			nia.				
(26)	M.	33.	Suicide by mer-				
			curial poisoning.				
(27)	M.	19.	Concussion of				
			brain.				

TUBERCULOSIS.

Number of deaths from Pulmonary Tuberculosis...	42
„ „ „ „ other forms of Tuberculosis	18

Total number of deaths from Tuberculosis 60

The 18 deaths from Tuberculous diseases other Pulmonary Tuberculosis have been as follows:—

Tabes mesenterica (Abdominal Tuberculosis)	6
Tuberculous meningitis	5
All other forms of tuberculous disease	7

Death rate per 1,000 of population from all forms
of Tuberculosis 1.8

Death rate per 1,000 of population from Pulmonary
Tuberculosis (Phthisis) 1.2

Although these figures show a slight improvement on last year's returns, the rate is much too high.

AVERAGE AGE AT DEATH FROM PHTHISIS.

The average age at death from Pulmonary Tuberculosis (Phthisis) is about 35 years.

DISTRICT MORTALITY.

	West Macclesfield.	East Macclesfield.	Sutton.
Phthisis	21	16	5
Tabes mesenterica	1	4	1
Tuberculous meningitis	1	2	2
General Tuberculosis	3	2	2
Totals	26	24	10

In my Annual Report for last year I discussed very fully the causes, mode of spread, etc., of Tuberculosis, and I indicated the lines upon which the Sanitary Authority might most profitably attempt to grapple with this preventable disease. I do not, therefore, propose to again cover that ground.

VOLUNTARY NOTIFICATION OF PHTHISIS.

The voluntary notification of Phthisis has been in force in this Borough since September, 1902.

In investigating the origin of infection, I must express my sincere appreciation of the tact and skill displayed by the Assistant Sanitary Inspector, Mr. Herman.

Number of cases notified	99
" " males notified	51
" " females notified	48
" " cases visited	59
" " cases where a clear history of infection from a previous case could be traced	24
Number of cases notified from Parkside Asylum...	16
" " " " " Workhouse	6
" " " " " Infirmary	2

None of these cases were visited.

The following list shows a few of the cases visited and the way in which the work is being carried on.

Necessarily to obtain such a mass of information which is carefully classified takes much time, care, and tact.

PERSONAL CONTACT.

- No. 2. F. Age 26. Shirtmaker.
Visited companion's sister, who died of consumption 6 months since. Companion is also consumptive.
- No. 5. M. Age 18. Railway porter last 18 months; previously assisted in bakehouse.
Brother consumptive (No. 106). Could not ascertain which started first.
- No. 6. F. Age 27. Silk finisher last 2 years, hemmer previously.
Works in same room as young woman who is consumptive also.
Mother died of consumption 10 years since.
Brother died of consumption 15 years since.
- No. 14. M. Age 2 years. Bottle fed. Mother's mother consumptive. Mother does not appear strong. Baby died of "consumption of bowels" when she was pregnant with this child.
- No. 15. M. Age 30. Fish hawker last 2 years. Fustian cutter previously. Worked in same room as man who died of consumption 2 years ago, and who used to spit on floor.
- No. 10. F. Age 26. Housework 3 years, cotton worker previously.
Mother died of consumption 6 years ago. Patient slept with her till she died. Companion died of consumption 9 months ago.
- No. 28. F. Age 43. Housework 2 years. Silk winder previously.
Waited on mother, who died of consumption 3 years ago (12 months before patient took bad).
- No. 37. F. Age 24. Shirt maker and silk hemmer. Nursed mother who died of consumption 10 years ago.
- No. 39. M. Age 63. Overlooker (silk).
Brother died of consumption 5 years ago.
Another brother died consumption 7 years ago.
Patient visited both.
- No. 41. M. Age 44. Stonemason. Four years since worked with two men, who coughed and spat very often. Had food in common messroom. These men spat on floor.
- No. 42. F. Age 42. Silk winder. Worked next to young woman who had bad cough and spit, and often spat on floor. She died between 4 and 5 years ago.

- No. 44. M. Age 29. Silkworker.
 Father died consumptive 9 years ago.
 Mother died consumptive 27 years.
 Patient often visited father.
- No. 52. F. Age 23. Maker up. Father died consumptive 7 years ago. (This patient is mentioned as the source of infection in No. 6.)
- No. 53. F. Age 69. Nursed granddaughter, who was bad 3 years with tubercular disease of the ankle, which gradually spread through her system.
- No. 55. F. Age 45. Patient nursed son, who died consumptive a few weeks ago.
- No. 57. M. Age 18. Blower. Companion workmate spits blood and often spits on floor.
- No. 62. Age 29. Baker
 Brother died consumptive 6 years ago.
 Sister died consumptive 8 years ago.
 Patient visited both.
- No. 79. F. Age 46. Silk winder. Mother died 10 years ago, say bronchitis, but she had a bad cough and spit.
- No. 82. F. Age 25. Hemmer.
 Sister died in same house of consumption 3 months ago.
 Sister died in same house of consumption 5 years ago.
 Patient's sister, who died in 1902, is mentioned as source of infection No. 2.
- No. 93. F. Age 25. Silk hand. Father has bad cough and spit.
- No. 97. F. Age 30. Housework. Husband's sister, who often visits, has bad cough and spit.
- No. 98. M. Age 20. Cotton hand. Sister died consumption 12 months ago. Patient visited her occasionally.
- No. 106. M. Age 23. Brother died consumptive, October, 1902, in same house. (See No. 5.)
- No. 107. M. Age 48. Designer. Brother died consumption 2 months ago. Patient visited him. Altogether 7 out of a family of 11 have died of consumption. Patient has since died, making 8.

INFECTION FROM WORK.

- No. 1. M. Age 63. Cabinet maker. Renovated old furniture. Very dirty jobs at times, cleaning dirt and filth off old furniture.
- No. 3. M. Age 28. Asylum attendant. Was in Hospital ward, where consumptive patients are nursed.
- No. 13. M. Age 32. Odd man for auctioneer; helped at sales, moving furniture, etc. Acted as bailiff, and as such been in all sorts of places.
- No. 30. M. Age 25. Tailor. Repaired and altered second-hand clothing, as well as making new.
- No. 43. M. Age 23. Moulder. Worked 2 years in rag and marine store; was healthy before.
- No. 54. M. Age 18. French polisher. Very dirty work, cleaning old furniture for renovating.
- No. 63. M. Age 46. Tailor. Repaired and altered second-hand clothing, and tramped in search of work.
- No. 87. M. Age 23. Assisted father to re-stuff and renovate old furniture.
- No. 105. M. Age 26. Clogger, engaged in new work. Says workshop was in a very bad, damp condition during his apprenticeship. Has since been improved.

DOUBTFUL CASES.

- No. 17. F. Age 1 year 9 months. Mother died 6 months previously, say from dropsy, but she had a nasty cough and used to spit. Brother died 6 years ago of bronchitis.
- No. 83. F. Age 18. Employed at a flour mill. Companion coughs and spits, often away from work through illness.
- No. 91. F. Age 17. Silk winder. For years has been subject to abscesses in various parts of body. Mother is delicate, has bad cough, but does not spit.
- No. 102. M. Age 22. Tram conductor at Manchester. Father's housekeeper said several of the family had "wasted away," but she was unable to give me any definite information.

CASES WHERE RELATIVES HAVE DIED OF CONSUMPTION 12 OR MORE YEARS AGO.

- No. 8. F. Age 44. Housewife. Mother died of consumption 13 years previously. Patient visited mother.
- No. 10. M. Age 26. Cotton weaver. Hot, dusty work. Mother died of consumption 20 years ago.
- No. 38. F. Age 30. Dressmaker. Grandmother died of consumption 20 years ago, not in same house.
- No. 54. M. Age 18. French polisher. (See remarks under work.) Sister died of consumption 16 years ago.
- No. 85. F. Age 74. Say 14 brothers and sisters have died of consumption, but it is over 30 years since the last one died.

It is well nigh impossible to over-estimate the value of such work in obtaining a clear knowledge of the incidence and mode of spread of Tuberculosis. If we bear in mind the facts: (1) That the incubation period of Phthisis is on an average 12 to 18 months, and (2) that the average of length of life from the first manifestation of the disease to the death of the sufferer is three to four years, and nearer three than four, we see the difficulties which arise in taking steps to prevent infection spreading.

It is, I believe, mistaken sentiment to encourage a person freely expectorating tubercle bacilli to remain in the factory or workshop, even on the plea that he or she must earn a living therein. It is false economy both as regards the fellow workmates and as regards the sufferer himself. An open-air occupation of a light nature is the only rational form of occupation. He will by that means continue to earn a wage for a much longer period of time, whereas if he remain in a factory his life will be much shortened and his possible chance of recovery lost.

Again, on economic and humane grounds a man or woman should be removed from close contact in a hot, crowded factory or workshop with his workmates. It is neither fair nor just to recklessly expose others to the risk of becoming infected.

This serious problem will have to be faced by Sanitary Authorities sooner or later, and the question of founding open-air colonies in connection with Sanatoria seriously considered.

Probably several local districts might join together under the County Council for this purpose.

SOURCES OF INFECTION.

The two most common sources of infection are:—

- (1) A consumptive relative.
- (2) A consumptive workmate.

There has now accumulated abundance of evidence that healthy persons do not contract consumption except upon intense exposure. Conditions of over-crowding, dark, dirty, damp houses, badly-paved back-yards, dusty occupations, excessive consumption of alcohol, all have their share in weakening the body and rendering it prone to take on tuberculosis.

These conditions cannot, however, in themselves cause consumption. They may induce conditions of general bad health, but in the absence of the tubercle bacillus they cannot cause tuberculosis.

WHAT IS BEING DONE.

(1) A number of cards have been printed and distributed about the town warning persons against the danger of indiscriminate spitting.

(2) A Bye-law has been passed imposing a penalty on any person who shall spit on the floor, side or wall of any public carriage or of any public hall, public waiting-room, or place of public entertainment.

(3) The Ladies Public Health Society have had a leaflet printed containing instructions for consumptives and for those in charge of them.

(4) The officials of the Health Office are always ready and willing to disinfect any house or clothing inhabited or used by a consumptive upon being requested to do so.

However during the last twelve months only six such houses have been disinfected.

I appeal to the medical practitioners of the Borough to help in this matter. They can urge upon relatives the extreme importance of having the rooms and bedding, etc., of a deceased consumptive disinfected and cleansed, and when they find that the house or living room of a consumptive bears traces of expectoration, they can point out the great necessity which exists for having such places cleansed, not only in the interest of the sufferer's relatives, but to prevent the possibility of re-infection to the patient himself.

WHAT MIGHT BE DONE.

- (1) Provision should be made for advanced cases of Phthisis being received in a special hospital or sanatorium. This is a very urgent need in cases where the consumptive lives in a crowded home. In these advanced cases the amount of infectious material coughed up and spat out is enormous, and there is usually a terrible accumulation of infectious material in the small houses of poor people.
- (2) More efforts should be made to instruct people as to the way in which consumption is spread, and for this purpose more careful supervision should be exercised over persons known to be consumptive.
- (3) Additional attention is required in public-houses and other places where spitting takes place.
- (4) More thorough cleansing and disinfecting of houses and rooms inhabited by consumptives.
- (5) More attention should be given to workshops in connection with the habit of spitting.

DEATHS FROM PHTHISIS IN PARKSIDE
ASYLUM.

14 deaths were certified to be due to Phthisis within this Institution during the last year. Last year 17 were so certified.

The Medical Superintendent, Dr. Sheldon, has kindly forwarded me some valuable remarks on this subject. He readily admits that direct infection occurs in Asylums.

He remarks: "We often get cases that expectorate, not only carelessly, but mischievously, covering the walls and floors of their rooms, clothing, and bedding with sputum. We now wash all these rooms down with perchloride and drape the doorways. Sputum, too, is often found on the asphalt paths. These we also have washed periodically. In fact, sputum of any description, wherever found, is now carefully removed. Bedding is periodically put through a Washington Lyon apparatus."

Such energetic action cannot fail to very materially reduce the number of cases of direct infection within the Asylum, notwithstanding the fact that many of the patients are peculiarly prone to tuberculous infection.

The question of dealing with the cough-sprayed droplets of tuberculous sputum will probably require further consideration.

EXAMINATION OF SPUTUM FOR TUBERCLE BACILLI.

Number of specimens sent to the Lister Institute
during 1903 11

Tubercle bacilli in 3 specimens:—

1 in small numbers.

2 in fair numbers.

Tubercle bacilli not found in 8 specimens.

Absence of the bacilli does not disprove the diagnosis of tuberculosis. Several specimens of sputum should be sent before a negative result is accepted. No information as to prognosis can be drawn from the numbers of bacilli present in the sputum.

THE RELATIONSHIP OF BOVINE TO HUMAN TUBERCULOSIS.

Although this question has been much discussed, it can, I think, hardly claim to be of first importance. I have been unable to trace any clear cases of human tuberculosis to consumption of tuberculous milk or meat.

One point of practical importance is that all cow's milk should be boiled or sterilised before being used as human food, and that no tuberculous flesh meat should knowingly be eaten.

THE ZYMOTIC DISEASES.

The seven principal Zymotic Diseases are:—

- (1) Smallpox.
- (2) Measles.
- (3) Scarlet Fever.
- (4) Whooping-cough.
- (5) Diphtheria.
- (6) Fevers—Typhoid and Typhus.
- (7) Zymotic Diarrhoea.

The total number of deaths from these diseases
during the years has been 33

Zymotic death rate per 1,000 of population	0.9
„ „ „ „ „ In England and Wales	1.46
„ „ „ „ „ „ Rural England and Wales ...	1.08
„ „ „ „ „ „ the Borough in 1902	0.3

The following table shows the deaths attributed to these diseases during the year, compared with 1902 :—

	1903.		1902.
Smallpox	2	...	1
Measles	0	...	2
Scarlet fever	9	...	1
Diphtheria	3	...	1
Whooping-cough	1	...	1
Typhoid fever	3	...	3
Zymotic diarrhœa	15	...	3

The following table shows the Zymotic death rate from 1874 :—

Years.	Death rate from the Seven Zymotic Diseases.	Years.	Death rate from the Seven Zymotic Diseases.
1874	2.5	1889	3.0
1875	2.4	1890	1.4
1876	6.0	1891	1.1
1877	2.1	1892	1.1
1878	2.3	1893	1.6
1879	1.7	1894	1.9
1880	1.1	1895	3.1
1881	3.4	1896	3.2
A1882	3.0	1897	3.2
1883	2.3	1898	1.8
1884	2.2	1899	2.6
1885	0.8	1900	1.8
1886	1.9	1901	1.6
1887	3.2	c1902	0.3
B1888	1.4	1903	0.9

A—Compulsory Notification came into force.

B—Isolation Hospital Opened.

C Isolation Hospital Enlarged and Improved.

The Zymotic death rate is just three times as large last year as it was the year before. This is due to the increased prevalence of scarlet fever and diarrhœa. Two years ago we had a severe epidemic of measles, which caused 15 deaths, consequently the town was last year fairly free from the disease. We may, however, anticipate another outburst next year, when a fresh amount of susceptible material will have again accumulated in the form of young children.

The notification of the first case of measles occurring in a family would, I believe, be a valuable step towards impressing upon parents the gravity of the disease, and the necessity for taking precautions to prevent its spread. At present the general public do not realise that measles causes more deaths than scarlet fever, besides leaving behind in many cases serious illness such as tuberculous pneumonia.

It would not be possible, even if desirable, to remove the sufferer to an Isolation Hospital, still notification is a valuable educational process.

It is desirable that measles should be made notifiable before it becomes epidemic, when steps can be taken to prevent its further spread.

Zymotic diarrhœa and enteric fever may justly be called "filth diseases." The privy-midden system in towns is mainly responsible for these deaths. Diphtheria seems to be peculiarly associated with dampness of the subsoil.

DISTRICT ZYMOTIC DEATH RATE.

	West Macclesfield.		East Macclesfield.		Sutton.
Smallpox	0	...	2	...	0
Measles	0	...	0	...	0
Scarlet Fever	7	...	2	...	0
Diphtheria	0	...	3	...	0
Whooping Cough.....	0	...	1	...	0
Enteric Fever	2	...	1	...	0
Diarrhœa	4	...	10	...	1
	—		—		—
Totals	13	...	19	...	1
	—		—		—
Zymotic death rate per 1,000 of population	0.7	...	1.5	...	0.2
	—		—		—

We find that East Macclesfield, with a much smaller population than West Macclesfield, considerably exceeds the latter district. This is what we should expect. A high rate of infantile mortality and a high zymotic death rate usually go together, and clearly point out where sanitary reforms are most urgently needed. The area which particularly needs attention is comprised within the parishes of St. Peter's and St. Paul's.

QUARTERLY ZYMOTIC DEATH RATE.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
West Macclesfield ...	4	3	4	2
East Macclesfield ...	3	5	5	6
Sutton	0	0	1	0
Totals	7	8	10	8
Rate per 1,000 of population	0.22	0.23	0.28	0.23

Again, as in the case of the infantile mortality rate, the zymotic death rate is higher during the 3rd and 4th quarters than during the 1st and 2nd quarters of the year.

ZYMOTIC, EPIDEMIC, OR SUMMER DIARRHŒA.

By these terms is meant those acute specific attacks of illness of which the diarrhœa is the most prominent symptom, which occur so generally in persons of all ages, but more especially in infants and young children, towards the middle or close of a hot, dry summer. The chief incidence of this form of diarrhœa falls upon those who are at the two extremes of life, or who are enfeebled in health. It appears to be due to consumption of tainted food, or of impure water, or of breathing foul air.

In certain instances these diarrhœal stools help to spread the disease.

	1903.	1902.
Number of deaths	15	3
Death rate per 1,000 of population...	0.4	0.08

DISTRICT QUARTERLY MORTALITY.

Quarter ending	March.	June.	Sept.	Dec.	Total.
West Macclesfield ...	0	0	4	0	4
East Macclesfield	1	1	4	4	10
Sutton	0	0	1	0	1
Totals	1	1	9	4	15

Of these 15 deaths, 11 occurred under one year of age, 3 between one and five years, and 1 in a person over 65 years of age. Two-thirds of these deaths occurred in East Macclesfield.

Over 75 per cent. of these infants were bottle-fed children.

When one considers the many contaminations to which milk is liable before it reaches the infants' stomach, and when in addition one thinks that during the warmer weather of the third quarter of the year all the possibilities of contamination are intensified a hundred-fold, it is easy to see why bottle-fed babies die so frequently during that particular portion of the year.

The diarrhoea death rate is always highest in the least sanitary part of a town. To avert this preventable excessive mortality, several lines of work are required.

We must try—

- (1) To keep the ground and houses clean, abolish the privy-midden, insist on back yards being rendered impervious to moisture and properly drained, see that the house possesses windows capable of being freely opened, and of admitting abundance of fresh air.
- (2) When the milk has been delivered, to keep it clean and fresh.
- (3) Instruct parents how to keep food fresh.
- (4) To get a clean milk supply.

These may seem difficult objects to attain, but in attaining them much indirect benefit will accrue, not only in the diminution of the number of deaths from diarrhoea, but in a general improvement of the physical, mental, and moral condition of the whole of the people.

MEASLES.

No deaths were registered from this disease during the year. Two years ago we had a severe epidemic of measles, which was directly responsible for 15 deaths. This year was an inter-epidemic year, and peculiarly suitable for commencing notification of measles. I do not suggest that every case should be notified, but that the first case occurring in a household might with advantage be notified. Parents and school teachers should be expected to notify the first suspicious cases noticed in the house or school.

Measles are required to be notified in Alderley Edge, Ashton-upon-Mersey, Lymm, and Wilmslow.

I do not suggest notification for the purpose of securing hospital segregation, but what is needed is more careful home isolation. At present there is much reckless disregard of the simplest precautions needed to prevent the disease spreading. It is no unusual thing to see children freely mixing with others whilst the rash of measles is still out. Careful home isolation should be continued for three weeks or a month.

The value of cutting short an epidemic of measles depends on the fact that it gives children time to pass the ages at which most attacks and the greatest fatality occur.

As regards closure of schools, I am now fully convinced, after five years' experience, that the view held by Dr. Niven, the Medical Officer of Health for Manchester, is correct, viz.: "Unless the infant departments of schools are closed when the proportion of children suffering from measles reaches 10 per cent., the next best thing is not to close the schools at all."

COMPLICATIONS OF MEASLES.

Deaths from measles itself are rare. Many of the cases described as hæmorrhagic measles are really hæmorrhagic smallpox. Broncho-pneumonia is the peculiarly fatal complication of measles.

Dr. Vacher, the County Medical Officer of Health, in his Report for the year 1902, remarks:—"Ordinary measles is a comparatively harmless malady in families comfortably off, but among the poor it is often very fatal. The main difference is that well-to-do people's children have been reared in healthy homes, and are put to bed as soon as the disease is recognised, while poor people's children are reared in crowded, ill-ventilated homes, and are left to run about after the disease is recognised."

Notification of first cases would, I believe, do much to dispel this ignorance, and would serve to impress upon those who need it the importance of treating measles more seriously to the great benefit of the sufferers and the community generally.

WHOOPIING COUGH.

One death in East Macclesfield during the second quarter of the year in a child under five years of age was registered from this disease during the year.

During 1901 whooping cough caused 12 deaths in children under five years of age.

As in the case of measles, we are at present passing through an inter-epidemic period, and I would point out that we may expect epidemics of measles and whooping cough within the next two or three years. Whooping cough is now the most fatal of all the infectious complaints of childhood under five years of age. The problem which it is the duty of those who are custodians of the public health to attempt to solve is—How can such epidemics be prevented or mitigated in their severity?

Every effort should be made, and constantly repeated, to impress on parents the gravity of the disease, and their duty to use every means in their power to shield young children from infection, and, when the disease is present, to enforce strict home isolation of the sufferer. This work might well engage the attention of the Ladies' Public Health Society, who by verbal warnings and the distribution of sheets of "Precautions against Whooping Cough," would do valuable work.

School teachers might also help in the same way by excluding from school suspicious cases, and children coming from infected households. Any illness in the infant department following on the occurrence of whooping cough should be viewed with suspicion, and the child sent home for observation for a few days.

Teachers would do well to bear in mind that the disease may be ushered in by no observable symptoms except perhaps coughing.

INFLUENZA.

Under this head are included deaths which are due to true Epidemic Influenza as distinguished from deaths due to the ordinary Influenza, cold or catarrhal fever, which latter disease appears to bear the same relationship to true Epidemic Influenza (*Influenza Vera*) as cholera nostras does to Asiatic cholera.

Number of death from Influenza 6

Quarter ending	March.		June.		Sept.		Dec.
West Macclesfield	0	...	0	...	2	...	0
East Macclesfield	0	...	0	...	1	...	2
Sutton	0	...	0	...	0	...	1

Three out of the six were in persons over 65 years of age.

Five out of the six deaths were from pulmonary complications.

I am of opinion that these figures do not represent all the deaths for which Influenza is responsible, many of the deaths in aged people being assigned by the certifying practitioner to heart disease and pneumonia.

In preventing the spread of this disease, which is extremely infectious, strict isolation of the sufferer is essential, and careful disinfection of the sputum and nasal discharges.

The figures clearly show how fatal the disease is in aged people, who should be most carefully protected from infection.

Dr. Vacher calls attention to the necessity which exists after the recovery of the patient for the disinfection of the rooms and clothing.

SCHOOL CLOSURE AND SCHOOL HYGIENE.

Practically speaking, the Sanitary Authority—the Corporation becomes the Educational Authority by the Education Act of 1902.

SCHOOL CLOSURE.

It has not been deemed necessary to close any school or class of a school with a view to preventing the spread of infectious diseases under Article 88 of the Educational Code. Last year four schools or parts of schools were closed, principally on account of the prevalence of measles.

I much regret the death of Article 101* of the Educational Code, by which formerly a grant ("Epidemic Grant") was claimable for children excluded from school, on account of infectious disease.

There is now a danger, that there is no "Epidemic Grant," of convalescent children being forced back into schools prematurely, so as to keep up the average attendances.

ELEMENTARY SCHOOLS.

We have 16 Elementary Schools within the Borough :—

(1) Broken Cross, St. Thomas's.

Average attendance week ending June 5th : Boys, 24 ; Girls, 33, Infants, 32.

(2) Christ Church School.

Average attendance week ending May 8th : Boys, 214 ; Girls 220 ; Infants, 143.

(3) Crompton Road School.

Average attendance week ending May 8th : Boys, 82 ; Girls, 85 ; Infants, 124.

(4) Hurdsfield Church Street.

Average attendance week ending June 12th : Girls, 194 ; Infants, 103.

(5) Hurdsfield, Daybrook Street.

Average attendance week ending June 12th : Boys, 128 ; Infants, 107.

(6) Lord Street British.

Average attendance week ending June 12th : Boys, 122 ; Girls, 144 ; Infants, 115.

(7) Mill Street School.

Average attendance week ending June 12th : Boys and Girls, 260 ; Infants, 217.

(8) Newtown.

Average attendance week ending May 14th : Boys and girls, 105 ; Infants, 78.

(9) National School, Duke Street.

Average attendance week ending June 12th : Boys, 177 ; Girls, 155 ; Infants, 142.

(10) Beech Lane, Old Church.

Average attendance week ending May 8th : Boys, 14 ; Girls, 17 ; Infants, 75.

(11) St. Alban's, Roman Catholic.

Average attendance week ending May 8th : Boys, 84 ; Girls, 101 ; Infants, 90.

(12) St. Paul's School.

Average attendance week ending June 12th : Boys, 190 ; Girls, 229. Infants, 190.

(13) St. Peter's School.

Average attendance week ending May 29th : Boys, 85 ; Girls, 70 ; Infants, 100.

(14) St. George's, High Street.

Average attendance week ending June 12th : Boys, 169 ; Girls 135 ; Infants, 125.

(15) St. George's Branch, London Road.

Average attendance week ending May 29th : Boys, 115 ; Girls, 95 ; Infants, 118.

(16) Bridge Street Centenary.

Average attendance week ending June 12th : Boys, 87 ; Girls, 118 ; Infants, 85.

It was decided that the Board of Education be asked to fix May 1st, 1903, as the appointed day for the Education Act of 1902 to come into force in the Borough.

It was also resolved that the present Medical Officer of Health be appointed Medical Officer to the Education Committee upon the same terms and conditions as he held the appointment under the late School Board.

It was also decided that Messrs. Whittaker and Bradburn, architects, be instructed to make an inspection of the 16 schools, and present a report thereon in the form to be supplied by the Town Clerk. This report includes details of school accommodation, dimensions of school and classrooms, cubical contents and floor area, the state of repair of the school buildings, the sanitary arrangements, the sanitary condition and sufficiency or otherwise of closet and urinal accommodation, the water supplied for drinking and other purposes, and the playgrounds.

This report is most complete and exhaustive. It is at the time of writing engaging the attention of the Education Committee.

Four out of the sixteen schools are provided with privy-midden accommodation, which, from personal inspection, is, I am of opinion, very insanitary, and for which a sufficiency of water-closets should be provided.

The Education Committee passed a resolution asking the School Management Sub-Committee to consider the advisability of making enquiries as to the physical condition of the children in the various schools, and particularly to ascertain whether there were any cases of children attending the schools suffering from want of food, or cases of sickness caused by injudicious feeding or food improperly prepared.

In reply, the School Management Committee suggest to the Education Committee that such a report should be made by the Medical Officer of Health.

The necessity for such periodical reports is now generally recognised.

Much unintentional cruelty is caused by attempts to force children who in consequence of physical or mental defects cannot legitimately be brought within the scope of ordinary school work. We may have children who are artificially stupid and abnormally dull at school work in consequence of some defect, usually of hearing or eyesight.

Then there are the feeble-minded, the imbeciles, the idiots, and the epileptics. The importance of detecting the feeble-minded child in its early years and providing it with such training as is suitable for its condition cannot be over-rated.

Mental over-strain may arise in elementary schools when children resume attendance at too early a date after acute illnesses, particularly after infectious diseases.

Careful observation is required to distinguish between the natural dulness of a child, dulness due to inattention and carelessness, and dulness caused by over-application or excessive mental exercise.

Symptoms ascribed to mental overstrain not infrequently have a more prosaic origin in deficient food, insanitary or unwholesome conditions of home life, or defect of eyesight, hearing, etc.

The importance of systematic inspection of children's teeth is, I believe, a subject which is of great importance to all concerned with the public health.

The dental condition of thousands of civilians who offered themselves in the service of their country during the South African War was most unsatisfactory, and resulted mainly from early neglect of the teeth. Systematic dental inspection should start as soon as the child goes to school.

PHYSICAL TRAINING.

The extreme value and importance, from a public health point of view, of carefully graduated physical exercises can hardly be over-rated. Apart from their utility in preventing bad postures, stooping shoulders, flat, narrow chests, and incipient spinal curvature, physical exercises give rest and diversion from direct intellectual toil, which is necessary to secure the best results from such toil. This principle is now recognised in the Code of Instruction for Elementary Schools (1900-1). The Borough of Macclesfield was one of the first towns in the country to start this work.

A voluntary Association, supported by subscriptions and called "The Macclesfield Patriotic Association," has for four years conferred upon 3,000 children of the town and district the benefits which accrue from systematic drill and carefully conducted physical training. The Secretary to the Patriotic Association reports as follows:—

"In the larger schools the boys are drilled separately in squads, nearly the whole of the time being devoted to physical training. As often as is convenient, boys are taught to command small sections, and impressed with the importance of the commands being correctly executed. Where girls are drilled separately, most of the time is devoted to physical exercises; in some schools Indian club exercises are taught to senior classes. About 50 boys from several schools have been put through a short course of musketry instruction, the dummy rifles being used for rifle exercises and aiming drill. In the target practice a .22 Winchester rifle was used, the range being about 40 feet, the target 6 in., and the bull's eye $\frac{3}{4}$ of an inch in diameter. And in the final shooting some very good scores were made—one boy making 19, another 18, and several boys 17 points out of a possible 20. As our income from public subscription increases—and it is unnecessary to point out that this must happen if this splendid work for the rising generation is to be continued—the Association will increase its facilities for the benefit of the children; in the past year something has been done in this direction, and in the year upon which we have entered a much larger number of boys will have an opportunity of learning to shoot.

"In the country schools boys and girls are drilled together, the work being modified somewhat to suit both. In all cases the "model course" is used in advanced squads, other work being added. In one

of the country schools the Headmaster has set an excellent example by erecting an open-air gymnasium, the apparatus, including a vaulting-horse with spring board, swings for boys and girls, rings and horizontal and inclined ladders."

THE NOTIFIABLE INFECTIOUS DISEASES.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

The Act requires that cases of smallpox, cholera, diphtheria, membranous croup, erysipelas, scarlet fever or scarlatina, typhoid or enteric fever, typhus fever, relapsing, continued and puerperal fever shall be notified to the Medical Officer of Health :

(1) By the head of the household to which the patient belongs, or in default any person in charge of or on attendance on the sufferer.

(2) Every medical practitioner attending on or called into visit the patient shall forthwith, on becoming aware that such patient is suffering from an infectious disease to which this Act applies, send a certificate to the Medical Officer of Health.

Plague has been added to the list of notifiable diseases.

Chicken-pox or Varicella was made notifiable for six months, from June 15th to December 15th.

PULMONARY TUBERCULOSIS.

The Town Council instructed the Town Council to apply to the Local Government Board for permission to include Phthisis in the list of diseases notifiable under the provisions of the Infectious Disease (Notification) Act, 1889. The Board replied that in their opinion Phthisis was not a disease to which the principle of compulsory notification could with advantage be applied, on the ground that many persons would be notified suffering from early Phthisis, not a few of whom might be expected to have many years of life in prospect, during which it would be imperative on them to gain a living for themselves, and often for their families, and for this reason the Board had not in any case assented to compulsory notification. They, however, recognised the importance of Local Authorities concerning themselves with the existence and progress of the disease by means of a system of voluntary notification. The Health Committee thereupon decided to invite voluntary notification.

NOTIFICATIONS IN MACCLESFIELD.

Year ending December 31st, 1903.

Diseases.	Under					Over		Total.
	1 year.	1-5.	5-15.	15-25.	25-65.	65.		
Smallpox .....	...	...	...	4	15	1	20
Scarlatina .....	...	37	88	14	2	...	141
Diphtheria .....	...	4	9	1	6	...	20
Typhoid Fever .....	...	1	3	4	13	...	21
Puerperal Fever .....	...	...	...	1	3	...	4
Erysipelas	1	...	4	2	19	2	28	
Chicken-pox	2	14	32	...	...	...	48
Totals	3	56	136	26	58	3	282	

The next table shows the number of Notifications received during the previous year.

NOTIFICATIONS IN MACCLESFIELD.

For Year ending December 31st, 1902.

Diseases.	Under					Over		Total.
	1 year.	1-5.	5-15.	15-25.	25-65.	65.		
Smallpox .....	...	...	...	...	6	3	9
Scarlatina	2	36	72	7	8	...	125	
Diphtheria .....	...	3	...	2	4	...	12
Membranous Croup ...	1	1	...	...	...	...	2
Typhoid Fever .....	...	...	1	5	20	...	26
Puerperal Fever .....	...	...	...	1	4	...	5
Erysipelas .....	...	1	1	2	13	...	17
Total	3	41	77	17	55	3	196	

Diphtheria and Erysipelas show marked increases. I particularly desire to call attention to the gradually increasing prevalence of Diphtheria. This insidious onset is peculiarly characteristic of the disease, and is a very suggestive warning of the danger of epidemic outbreak.

QUARTERLY NOTIFICATIONS.

NOTIFICATIONS

For Quarter ending March 31st, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Smallpox .....	...	...	...	2	9	0	11
Scarlatina .....	...	15	36	8	1	...	60
Diphtheria .....	...	2	4	1	...	...	7
Typhoid Fever .....	...	...	...	...	4	...	4
Erysipelas	1	...	...	...	3	...	4
Total	1	17	40	11	17	...	86

NOTIFICATIONS

For Quarter ending June 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Smallpox .....	...	...	...	2	6	1	9
Scarlatina .....	...	12	41	6	...	...	59
Diphtheria .....	...	...	4	...	2	...	6
Typhoid Fever .....	...	...	...	1	1	...	2
Puerperal Fever .....	...	...	...	1	2	...	3
Erysipelas .....	...	...	2	...	5	2	9
Chicken-pox	1	1	3	...	...	...	5
Total	1	13	50	10	16	3	93

NOTIFICATIONS

For Quarter ending September 30th, 1903.

Diseases.	Under 1 year.	1-5.	5-15.	15-25.	25-65.	Over 65.	Total.
Scarlatina .....	...	5	7	...	...	...	12
Diphtheria .....	...	1	1	...	4	...	6
Typhoid Fever .....	...	...	2	1	2	...	5
Puerperal Fever .....	...	...	...	...	1	...	1
Erysipelas .....	...	...	2	2	5	...	9
Chicken-pox	1	8	25	...	...	...	34
Total	1	14	37	3	12	...	67

NOTIFICATIONS

For Quarter ending December 31st, 1903.

Diseases.	Under					Over		Total.
	1 year.	1-5.	5-15.	15-25.	25-65.	65.		
Scarlatina	5	...	4	...	1	...	10
Diphtheria	1	...	...	...	...	...	1
Typhoid Fever	1	...	1	...	2	...	10
Erysipelas	5	1	6
Chicken-pox	5	...	4	...	...	...	9
Total	12	...	9	...	3	11	36

These four tables teach the lesson which their predecessors last year taught. When smallpox was threatening to become epidemic we ceased pressing our cases of scarlet fever into hospital, having in view the possible spread of smallpox and the necessity arising for using the Scarlet Fever Wards for smallpox patients.

Last year the 2nd and 4th quarters were when we were threatened by smallpox. This year it is the 1st and 2nd quarters. It cannot, therefore, be alleged that the increase of scarlet fever is more closely related to some seasonal cause than to administrative necessity.

I am yearly more impressed with the value of segregation of scarlet fever cases in a special hospital as a means of preventing the disease spreading, but naturally this postulates that all the cases capable of spreading the disease to any considerable extent should be isolated. Where hospital isolation has failed to check the spread of scarlet fever it is, I believe, because it has not been properly carried out. The prompt removal of the first cases, and careful disinfection of building, rooms, etc., is of much greater value than wholesale removal to hospital when the disease has got a firm hold in several quarters of the town. This can only be accomplished by the medical practitioners' ability to promptly recognise the disease, and as promptly to notify; 48 hours' delay, and the visits of a few sympathetic neighbours, may spread the disease broadcast.

DISTRICT NOTIFICATIONS.

	West Macclesfield.	East Macclesfield.	Sutton.
Smallpox	6	14	0
Diphtheria	11	8	1
Erysipelas	14	7	7
Scarlet Fever	77	49	15
Enteric Fever	12	5	4
Puerperal Fever	3	1	0
Chicken-pox	18	27	3
Totals	141	111	35
Notification rate per 1,000 of population	8.1	8.9	7.6

The incidence of the notifiable infectious diseases has been heavier in East Macclesfield than elsewhere. In West Macclesfield we have a gradually increasing number of diphtheria cases notified year by year. Under such circumstances, I believe that, given certain favouring meteorological conditions, diphtheria becomes more or less epidemic.

Enteric fever still continues to prevail in all quarters of the Borough.

VACCINATION RETURNS FOR 1903.

Mr. J. B. Millward, the Vaccination Officer, has kindly supplied me with the following returns for the year 1903 :—

Vaccinated in West Macclesfield	328
„ „ East Macclesfield	288
Postponed owing to health	40
Exempted	5
Insusceptible	1
Left district	8

In view of the fact that fresh vaccinal legislation is impending, it should be clearly understood that successful vaccination in infancy is insufficient to prevent epidemics of smallpox.

The essential protective against epidemic smallpox and the logical complement to infantile vaccination is obligatory re-vaccination of all children at 12 years of age.

The experience of Germany shows that where re-vaccination is successfully performed at the age of 12, smallpox is unable to take on an epidemic form.

There is very much less objection to re-vaccination at school age than at later periods of life, since it does not entail an important interruption of work.

If re-vaccination at 12 years of age is made obligatory, all the difficulties about smallpox hospitals, vaccination of contacts, isolation of families, and so on, will practically disappear.

SMALLPOX.

Number of cases notified	20
,, ,, deaths	2

In my last Annual Report I gave an account of the outbreak of smallpox occurring in 1902, and detailed the steps which led to the erection of a Smallpox Hospital by the Corporation. During January we were free from smallpox, and we were congratulating ourselves on escaping further trouble, until Wednesday, February 18th, when I was asked by the Police Surgeon, Dr. Averill, to see a man named William Hatton, a prisoner, who had been apprehended by the Police the previous night in the Woodman Public-house, Hurdsfield.

I found him suffering from well-marked and semi-confluent smallpox.

Hatton had come into the town on Monday, the 16th of February, from Rochdale. He informed me he had been staying the previous fortnight at Ward's Lodging-house, Rochdale, and that a man had been removed therefrom to the Smallpox Hospital, and that when he (Hatton) left, another lodger was ill and covered with a rash. There were three other prisoners in adjoining cells, which ventilate into a common passage.

After Hatton's arrival in the town on Monday, he had spent his time rambling about, and drinking in the public-houses, particularly the Woodman, in Hurdsfield, and he had slept at night at Hudson's Common Lodging-house in Hawthorn Street.

Obviously the possibilities of spreading infection were very great, and subsequent events amply justified this surmise.

The first step taken was the immediate removal of Hatton to the Smallpox Hospital, and then, after consultation with the Magistrates' Clerk and Chief Constable, a remand was asked for the remaining three prisoners, and re-vaccination was offered them by the Public Vaccinator at my request. Two were re-vaccinated and took well, the third had good marks of recent re-vaccination, and so it was not thought necessary to again vaccinate. The cell was thoroughly drenched, with a 5 per cent. solution of Formic Aldehyde, and the clothing, bedding, etc., conveyed to the Thresh steam disinfecter. No further cases occurred in the Police Station.

I communicated with the Public Vaccinator, and gave him the names and addresses of all the public-houses Hatton remembered visiting.

I also communicated with the Medical Officer of Health for Rochdale.

The next two cases were notified on March 6th, 1903. One case was that of a woman, of Hulley Place, Hurdsfield, who had served in the Woodman Inn when Hatton was present, and the second was a man, of Garden Street, Hurdsfield, a brick-setter, who had been repairing the back of a firegrate in a room in which Hatton was sitting. He was at once removed to the Smallpox Hospital.

The woman had been delivered of a child on the early morning of the 6th, and so it was not deemed safe to remove her for a day or two. She was removed with her child on the 9th. The usual procedure was followed in both these cases. (1) Removal of patients; (2) immediate information to Public Vaccinator; (3) cleansing and disinfection.

The difficulty lies in getting contacts to submit to vaccination, and the extraordinary way in which ignorant people will wilfully conceal the names of contacts, so that only the most careful and searching questions drew but a tithe of truthful information, in spite of much time, tact, and patience.

On March 10th, the wife of the proprietor of the Common Lodging-house in Hawthorn Street, wherein the man Hatton had slept on the nights of the 16th and 17th February, was notified. She had been ill about a week prior to notification. I visited her the same day, and found the rash was in the pustular stage, and ordered her immediate removal to Hospital.

As complete a list of contacts as possible was obtained by me, and immediately sent to the Public Vaccinator. The house was closed for a couple of days while it was cleansed and disinfected, the bedding being sent to the Thresh disinfecter.

I may add that this patient had been offered, and refused, re-vaccination on February 18th, after Hatton's removal.

The next notification was received on March 10th, in a man lodging at 8, Waterloo Street, Hurdsfield. He is a carter, living at Levenshulme, and had only come into the town on February 28th. He had commenced to be ill on March 3rd, with shivering, headache, etc. He had been carting the previous fortnight on the road between Levenshulme and Reddish, at both of which places smallpox was prevalent. He does not know that he actually came into contact with any case.

This case was evidently contracted outside the Borough. The date of onset of the disease, and the absence of any history connecting him with previous cases, confirms this view. He was, therefore, another imported centre of infection, as the disease had reached the pustular stage (discrete) when detected. He was removed at once to our Smallpox Hospital, re-vaccination of contacts, cleansing and disinfection being carried out.

On March 23rd a man residing at Hudson's Lodging-house was notified suffering from smallpox. This was a severe confluent case. He had been in Hudson's house on the 9th and 10th of March, when Mrs. Hudson was attacked. He was offered re-vaccination on March 10th, but refused. The closing, cleansing, etc., of this house was again repeated, and some few of the contacts accepted re-vaccination. He was at once removed to Hospital. He had been travelling about with a threshing machine in the Macclesfield Rural District, and also in the Styal District. I at once informed the respective Medical Officers of Health of the farms at which he had lodged.

On March 25th a man was notified as suffering from smallpox, a bad, confluent case. He slept for some three nights in the Model Lodging-house, Stanley Street, with 25 other men, many of them casuals.

This infection was also traced to Hudson's Lodging-house, where he had slept on the night of March 7th and 8th, when Mrs. Hudson was ill.

This case I consider a most dangerous source of infection, principally because so many of his fellow lodgers were casuals, of whose whereabouts nobody knew. I made most careful and searching enquiries from the keeper of this house, but I find it almost a work of despair, for, when the contacts are with pain and difficulty traced, many cannot be persuaded or cajoled into being re-vaccinated.

On March 26th, 1903, a man living in Waterloo Street, Hurdsfield, was notified. This man lives at a small provision shop with an off-beer licence. The shop is a little higher up the street than the house at which the carter from Levenshulme lodged, although I cannot trace any definite history of exposure to infection. Still I have little doubt that either directly or indirectly the carter from Levenshulme infected this case.

He began to be ill on March 21st or 22nd. The carter was removed to Hospital on March 10th, therefore the period of this man's incubation, and the neighbourhood and nature of his business, render it almost certain he derived his infection from the carter from Levenshulme.

In this case the shop was closed for cleansing, and the stock exposed ordered to be destroyed.

He was removed to Hospital, and the Public Vaccinator informed and requested to call.

On March 27th a man and woman were notified. The man and woman are brother and sister to Mrs. Hudson, who was notified on March 10th. The infection in both these cases was undoubtedly derived from Mrs. Hudson, and thus through Mrs. Hudson from Hatton.

The man's wife visited Mrs. Hudson on the 9th of March, and he was taken ill on the 20th.

The woman visited Mrs. Hudson on March 7th, and she was taken ill on the 20th, or rather she first noticed the papules on her wrist on that date. Both the man and woman had the disease in a mild, discrete form. The woman has only a few pustules all over her. Both patients were once removed to our Isolation Hospital for Smallpox, the Public Vaccinator informed, and the houses cleansed and disinfected.

The town has been placarded with large bills, and small bills have been widely distributed urging vaccination, etc.

On March 31st a case was notified in a man, which turned out not to be smallpox.

On April 2nd a woman was notified. No history of exposure to infection. She had been home, where she said a school was closed on account of the prevalence of "chicken-pox" amongst the scholars. This case was discrete and mild.

On April 11th a woman was notified. She had been in and out of one of the previous patient's houses twice a day whilst he was ill in bed. She was infected two days before re-vaccination.

On April 16th another woman was notified. She had the disease in a severe, confluent form, and died on April 27th. I could not get any history of exposure to infection in Macclesfield. She had been in Manchester twelve days before being taken ill.

On April 22nd a woman was notified. She had visited a patient, the re-vaccinated woman, every day the week previous to the latter's admission to hospital. She had severe, confluent smallpox.

On April 25th a man was notified. The origin is not quite clear. Possibly he was infected from the previous case but one.

On April 28th a woman was notified. She cleaned for a woman who nursed one of the previous cases before her admission to hospital.

April 29th, a man was notified. Source of infection could not be ascertained.

On May 5th another man was notified. He lives next door to some people who were related to the woman who died.

On May 19th a woman was notified. She visited the last case twelve days before she was taken ill. She had a very severe, confluent attack. On admission she was about eight months pregnant, and on May 27th she was delivered of a female child, which died on June 6th. She suffered severely from septic pneumonia and phlegmasia alba dolens, with secondary abscesses in and around the ankle joint. She made a good recovery. She was in hospital from May 27th to September 14th.

In every case except one your Medical Officer of Health saw the patients previous to admission into hospital.

All the patients, no matter what was the time of day or night, were at once removed to hospital; the Public Vaccinator informed and disinfection and cleansing carried out; the obtaining of lists of contacts, etc., carried out. A small house in Westminster Street was fitted up as a temporary refuge for the people living in the same house as the sufferer, to go to whilst their own house was cleansed and disinfected.

The amount of extra work, worry, and responsibility imposed on your officials during the first five months of the year was enormous, and I cannot pass without expressing my high appreciation of the

skill, ability, tact, and hard work of all my colleagues in the Health Department, and of the devotion and care of Miss Chapman, our Hospital Matron.

OBSERVATION WARD.

It is necessary that some structure separate and apart from the Smallpox Hospital should be erected in which doubtful cases of smallpox could be placed for observation for a few days.

SCARLET FEVER OR SCARLATINA.

Number of cases notified	141
" " " " last year	125
" " deaths	9
" " " last year	1
" " cases removed to hospital	101
Percentage of cases notified removed to hospital...	71

Districts from which cases were removed :—

West Macclesfield	54
East Macclesfield	35
Sutton	12

60 cases were notified during the 1st Quarter.

59	"	"	"	"	"	2nd	"
12	"	"	"	"	"	3rd	"
10	"	"	"	"	"	4th	"

A careful study of the statistics for the past three or four years will show that the case of mortality from scarlet fever is rising. The same phenomenon has been noticed in London, and I believe indicates that scarlet fever is increasing in virulence. This is quite in keeping with what we know of the behaviour of this disease in past years. Scarlet fever has years and groups of years of maximum and minimum virulence. We have, I believe, passed through a period when scarlet fever was of its mildest type, and consequently the gradually increasing case mortality warns us that we are approaching a time when we may expect scarlet fever to manifest greater severity. This gradual change of type from severe to mild, and vice-versa is probably spread over many years. Still the recrudescence of severity might be more rapid than the previous decline.

SANITATION OF SCARLET* FEVER HOUSES.

36	cases	occurred	in	houses	with	clean	water-closets.
5	„	„	„	„	„	waste	„
100	„	„	„	„	„	privy-middens.	

Of these—

15	were	offensive.
14	„	wet and offensive.
6	„	defective and offensive.
5	„	offensive and close to house.

Drainage was defective in four cases. Four houses were overcrowded.

In 16 instances two cases were reported from the same house, and in one instance three from one house. I have not been able to discover any “return cases,” although they have been most carefully looked for. We, however, protect ourselves by giving to the child’s parents or guardians a signed notice that the Corporation will not be liable for future infection after the child’s discharge from hospital.

In attempting to deal with scarlet fever we have always to take into consideration that there is a proportion of overlooked, mis-diagnosed, and concealed cases, so that it is doubtful whether we can ever hope for more than a reduction of the incidence and fatality of the disease.

MACCLESFIELD FATALITY OF SCARLET FEVER DURING 1903.

Fatality under five years of age	10 per cent.
„ from five to ten years of age ...	5 per cent.

This table shows clearly how the fatality of scarlet fever diminishes as the age increases, and is a strong argument for using every means to avert the infection of young children. The figures are strongly corroborated in the following extract.

The Registrar General, in his 49th Annual Report (1886), says:—

“Now it is sometimes said that the separation from its
“family of a child who is attacked by Scarlet Fever is scarcely
“worth the trouble and expense it involves, seeing that the

“rest of the children though they may escape on that special
 “occasion are almost certain to contract this very common
 “disease at some future time, and may therefore as well, if not
 “preferably, have it at once.

“The results, however, to which our statistical enquiry has
 “lead it are completely subversive to such a position. They
 “show, independently of the plain fact that a very large pro-
 “portion of persons go through life without ever contracting
 “the disease, that the longer an attack is deferred the less
 “likely is it to occur at all, and not only so, but that even
 “supposing it to occur eventually the less likely is it to end
 “fatally.”

SCARLET FEVER AND SCHOOLS.

In order to observe whether aggregation of children in schools had played any important part in the spread of the disease during 1903, I have had the following table prepared.

This table, together with the fortnightly “spot maps” submitted to the Health Committee, do not show any special grouping of cases around schools, and although it cannot but happen that some amount of infection is spread by schools, I do not think that for the year now under consideration this factor is of much value. Consequently, although the total amount of scarlet fever amongst school children has been considerable, it has not been thought necessary to close any schools on that account.

95 CASES OF SCARLET FEVER OCCURRED IN CHILDREN ATTENDING THE
VARIOUS SCHOOLS THESE WERE DISTRIBUTED AS FOLLOWS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total Number of Cases Notified	31	14	15	17	19	23	5	2	5	2	3	5
Number attending	1	1	...	1	4	2	...	...	...	...	...	...
Beech Lane ...	1	...	...	...	1	...	...	...	...	...	...	...
Centenary ...	1	...	...	...	1	...	...	...	...	...	...	...
Christ Church ...	...	1	1	2	1	3	1	...	...	...	1	...
Crompton Road ...	...	...	2	4	...	1	...	...	...	...	...	...
Mill Street ...	2	1	3	...	...	2	...	...	1	...	...	...
National ...	2	...	1	...	...	2	...	...	1	...	...	...
St. Alban's ..	1	4	1	...	...	1	...	...	1	...	...	...
St. George's...	...	1	...	...	...	1	...	1	...	...	...	1
St. George's Branch	2	1	...	3	...	...	2	1	...	...	...	1
St. John's ...	4	1	...	...	...	...	...	1	...	...	...	...
St. Paul's ...	5	...	...	...	...	2	...	1	...	1	...	...
St. Peter's ...	1	...	...	...	...	...	...	...	...	...	...	...
Higher Hurdfield.	...	...	...	1	...	1	...	...	...	...	...	...
Lower Hurdfield..	...	...	...	...	5	...	...	...	...	...	...	...
High School ...	...	...	...	...	3	...	...	...	...	1	...	...
Private Schools ...	1	...	2	1	...	...	...	...	...	...	...	...

DIPHThERIA.

Number of cases notified	20
„ „ „ „ last year	14
„ „ deaths	3
„ „ „ last year	1
„ „ cases removed to hospital	7

5 cases were removed to hospital from West Macclesfield.

2 „ „ „ „ „ „ East Macclesfield.

11 cases occurred in West Macclesfield.

8 „ „ „ East Macclesfield.

1 case „ „ Sutton.

FATALITY.

Under five years of age 50 per cent.

Five to ten years of age 11 „ „

SANITARY CONDITION OF THE HOUSES.

7 cases occurred in houses with clean water-closets.

1 case „ „ a house with a waste water-closet.

12 cases „ „ houses with privy-middens.

Of these :—

4 were offensive.

4 were wet and offensive.

1 was dilapidated and offensive.

The drains were bad in one block of property. In one case the house was over-crowded. Two cases were notified from the same house. There was no evidence of special incidence on any particular school.

It cannot be too often impressed on the public mind that the local (throat) symptoms of diphtheria are comparatively unimportant, and that it is to the general symptoms caused by the poison (toxin) that diphtheria owes the greater part of its high mortality.

Diphtheria anti-toxin neutralises this poison (much in the same way as alkali neutralises an acid), and prevents it from harming the vital structures; but it does not repair the harm that the toxin has done. Therefore, one of the most essential requirements in connection with diphtheria is the early injection of anti-toxin. A supply of anti-toxin is always kept on hand at our Isolation Hospital.

The Sanitary Authority have realised that it is their duty and privilege to provide for the bacteriological investigation of supposed diphtheria free of charge to doctor and patient, and supplies outfits to be used for taking the material and transmitting it to the laboratory (the Lister Institute of Preventive Medicine).

BACTERIOLOGICAL EXAMINATIONS.

61 specimens were sent to the Lister Institute during the year.

In 57 the bacillus diphtheria was not found.

„ 2 the pseudo-diphtheria bacillus was found.

„ 2 the true diphtheria bacillus was found.

A negative result may mean :—

- (1) That the patient is not suffering from diphtheria.
- (2) That an antiseptic was used too soon before taking the swab.
- (3) That the diseased portion of the throat was not touched.

We may exclude errors in the laboratory.

Three consecutive failures to find the diphtheria bacillus are required before any importance attaches to the result.

Every sore throat should be regarded as possible diphtheria until it is proved to be not so. As regards the pseudo-diphtheria bacillus of Hoffman, it is safest to regard any patient who presents these bacilli as infectious, but he should not be sent into a diphtheria ward unless protected by a full dose of diphtheria antitoxin.

ENTERIC OR TYPHOID FEVER.

Number of cases notified	21
„ „ „ „ last year	26
„ „ deaths	3
„ „ „ last year	3
None of the cases were removed to hospital.	

FATALITY.

Fatality rate per cent. notified	14
„ „ „ „ „ last year	11

Thus, although the cases have been fewer, the fatality rate has been higher.

Districts in which the cases have occurred:—

West Macclesfield	12
East Macclesfield	5
Sutton	4

4 cases were notified during the 1st Quarter.

2 " " " " " 2nd "

5 " " " " " 3rd "

10 " " " " " 4th "

3 cases were notified from Parkside Asylum.

2 " " " " the Infirmary.

One of the Infirmary cases was removed from a canal boat.

3 occurred in houses where there were clean water-closets.

2 " " " " " " waste "

10 " " " " " " privy-middens.

Of these:—

4 were wet and offensive.

1 was very close to the house.

In two instances a second case was notified from the same house.

The cases were not specially related to milk or water supplies so far traceable.

The one outstanding fact in most of these cases is the presence near the dwelling of an accumulation of putrefying human excreta contained in a pit called an ashpit. The ashpits! harbour and breed flies to which may reasonably be assigned an important part in the spread of infection.

Dr. Vacher, quoting Dr. Tooth, says:—"Speaking on the recent epidemic of enteric fever in South Africa, in his opinion the disease was spread not only by polluted water, but by dust and flies. He adds that flies seem to be peculiarly attracted to enteric fever patients, hanging in loathsome groups around their mouths and feeding vessels." Again, Dr. Vacher says:—"The fouling of the air near dwelling houses by emanations from large privy-middens is always going on, and the health of the inhabitants is below par, but there is no enteric fever till a case is imported, and then the disease spreads.

The typhoid stools are deposited in the midden, and by the action of the sun and wind, particles are lifted into the air and spread the disease."

When the pest-holes are emptied the filth is deposited in the street, and thus a second centre for the diffusion of dried typhoid stools is provided in a public place, possibly adjacent to some shop-door or window where food is exposed for sale.

The remedy is obvious. All privy-middens in towns are a dangerous nuisance, and as such should be abolished.

The idea that a cloud of dust on a dry, windy day may consist principally of dried privy-filth is too disgusting to bear contemplation.

On receiving a notification of a case of enteric fever a pail and an abundant supply of disinfectants is at once sent to the house, with instructions that all excreta from the patient are to be put in the pail, which is frequently removed and thoroughly cleansed. But all these precautions are wasted if there is delay in notifying. The midden is infected. In such cases I require the nightsoil foreman to order the careful emptying and scraping of the midden and the thorough saturation of its walls and floors with Chlorinated lime-wash. In some cases where the midden is old and dilapidated, and resembles a huge cavern with many recesses, it seems almost impossible to adequately cleanse and disinfect such a place.

WIDAL REACTION.

34 specimens were sent to the Lister Institute of Preventive Medicine for examination where enteric fever was suspected.

In 4 a distinct reaction was obtained.

„ 1 a feeble „ „ „

„ 29 no reaction was obtained.

Four were repeats, and one of these gave a distinct reaction. Although this reaction is a general one, given by most if not all bacterial diseases, yet it differs in one most important respect, that whereas this agglutinative phenomenon in many diseases is a reaction of immunity (i.e., does not occur till late in or after the disease) in typhoid fever, it is a reaction of infection, and occurs so early as to be of great value in diagnosis, and thus shortens the period before notification, which is the most dangerous delay from a public health point of view. If the practitioner declines to avail himself of this test, and awaits developments, and no precautions are taken in dealing with the patient's stools and urine, then certainly infection will spread which might and should have been avoided.

PUERPERAL FEVER.

Number of cases notified	4
„ „ deaths	1

Puerperal fever has been defined by the Royal College of College of Physicians of London as including “septicæmia pyæmia, septic peritonitis, septic metritis, and other acute septic inflammations in the pelvis, occurring as the direct result of child birth.” Arrangements are made at the Isolation Hospital for the disinfection of women who have been in attendance on a case of puerperal fever.

MIDWIVES' ACT, 1902.

The Act came into force on April 1st. The supervising authority for Macclesfield is the County Council.

Last year I gave an epitome of the Act.

A resolution was passed asking the County Council to consider the desirability of delegating their powers and duties to the Town Council.

The Medical Officer of Health was later instructed to obtain from the medical practitioners a list of midwives practising with the Borough. This has been done, and the list forwarded to Dr. Vacher.

Whilst this Report was in hand, the County Council passed the following resolution:—“That the Councils of the several Municipal Boroughs and Urban and Rural Districts in the Administrative County be invited to appoint the Chairman or some other member of their respective Health or Sanitary Committees and Medical Officers of Health to attend a Conference with the members of this Committee (Midwives Act, 1902, Committee) to generally discuss the administration of the Act within the County, and in particular to the terms upon which they would be prepared to recommend their respective authorities to assist in carrying out the Act within the areas under their respective jurisdictions.” The Health Committee appointed the Chairman, Mr. Alderman Pickford, and the Medical Officer of Health to attend the Conference, which has not yet been held.

The supervision of midwives will involve:—

- (1) The keeping of a register of the names and addresses of midwives practising within the Borough.

- (2) The periodical inspection of the midwives' case books, bag of appliances, etc., places of residence, and mode of practice.
- (3) The investigation of charges of malpractice, negligence, or misconduct made against any midwife.
- (4) The suspending from practice of any midwife in order to prevent the spread of infectious disease.

It is important that an agreement should be arrived at as to the amount the Sanitary Authority will be entitled to charge for carrying out this Act.

If the County Council are not disposed to delegate their authority, there seems no objection against the County Council making arrangements with the District Medical Officers of Health to undertake the work of inspecting, reporting, etc., to the County Medical Officer.

In that case the District Medical Officers would be assistants to the County Medical Officer for the purpose of the Act.

The following is a list of the midwives, so far as at present known, practising within the Borough. Any woman practising as a midwife whose name does not appear on this list should at once inform the Medical Officer of Health.

NAMES AND ADDRESSES OF MIDWIVES PRACTISING IN THE BOROUGH OF MACCLESFIELD.

Broome, Mrs., 21, Roe Street, Macclesfield.
 Brocklehurst, Mrs., 223, Crompton Road, Macclesfield.
 Bunting, Mrs. 68, Black Lane, Macclesfield.
 Brown, Mrs., 64, Coare Street, Macclesfield.
 Bailey, Mrs., 66, Waterloo Street East, Macclesfield.
 Brierley, Mrs., 14, Lowe Street, Macclesfield.
 Chapel, Mrs., Higher Hurdsfield.
 Guerin, Mrs., 34, Barton Street, Macclesfield.
 Harrison, Mrs., 25, Prestbury Road, Macclesfield.
 Hibbert, Mrs., 71, Mill Lane, Macclesfield.
 Hackney, Mrs., 5, St. George's Street, Macclesfield.
 Harper, Mrs., 25, Nixon's Yard, Macclesfield.
 Johnson, Mrs., 1, Langford Street, Macclesfield.
 Meakin, Mrs., 38, Hayes Yard, Macclesfield.
 Sheriff, Mrs., 176, Newton Street, Macclesfield.

THE ISOLATION AND SMALLPOX HOSPITALS.

The year 1903 was one of exceptionally heavy work, smallpox and scarlet fever epidemics prevailing at the same time. Fortunately, the use of these hospitals kept the diseases within bounds, and the Borough was spared a devastating epidemic of smallpox. Had we been able to isolate our cases of scarlet fever as readily as we isolated the sufferers from smallpox, I believe we should have controlled the former disease much more effectually.

THE VALUE OF AN ISOLATION HOSPITAL.

The value of these hospitals lies not primarily in the work they accomplish, but in the prevention of the spread of disease. When an infectious disease becomes seriously epidemic, it shows that the hospital has failed to carry out its prime object—the checking of its spread in the early stage.

THE VALUE OF EARLY REMOVAL TO HOSPITAL.

An Isolation Hospital can only justify its existence when there is early notification from the practitioners of the presence of infectious disease, and prompt removal to hospital.

Where the medical practitioner delays notifying, or where, after notification, there is further delay in removing the patient, then during either or both of these delays the disease is spreading.

Number of cases admitted during the year 1903 ... 131

Number admitted in 1902 106

The number of cases treated has been :—

Smallpox	22
Scarlet Fever	101
Diphtheria	8
	<hr/>
	131
	<hr/>

Number of deaths :—

Smallpox	2
Scarlet Fever	9
Marasmus	1
	<hr/>
	12
	<hr/>

Number of days of patients in hospital:—

In Isolation Hospital	5,862
„ Smallpox Hospital	988
	<hr/>
Total number of days of patients in hospital ...	6,850
	<hr/>

14 Nurses, at different periods of time, were
employed at both Hospitals 1,173 days.

The latter figures do not include the Matron and servants.

All the patients at the Hospital, with the exception of three, were attended by the Medical Officer of Health. This has entailed many hundreds of visits being made to both hospitals during the year, and much additional work, worry, and anxiety.

COST OF FEEDING PATIENTS AND NURSES.

The total cost of food at the General
Isolation Hospital for the year was ... £311 3 9

This sum includes the cost of butcher's meat, groceries, fish, fowl and rabbits, potatoes and vegetables, milk and eggs, bread, bacon, and pork.

Cost per patient and nurse per day for all above
items of food 10½d.

SMALLPOX HOSPITAL.

Total cost of food at Smallpox Hospital... £93 7 9

Cost per patient and nurse per day for food... 1s. 4½d.

The extra cost of the Smallpox Hospital for food as compared with the General Hospital is due to the fact that the patients were adults who, after recovery from a serious and debilitating disease, required extra nourishment.

During the height of the disease many of the patients required stimulants, the cost of which is included in the items of expenditure under the head of food. I have not dealt with the feeding of the servants, the cost of whose food is included in the above sums. Had I done so, it would have considerably reduced the cost per head of persons actually fed at the hospitals.

Considering that none of the goods were purchased by tender or contract, but were all bought in the ordinary way, and considering also that the catering for so large a number of people seriously ill at a time when serious disease was threatening to become epidemic, is exceptionally difficult, I contend that the expenditure on food was far from excessive, and reflects great credit on the Matron (Miss Chapman). I propose next to consider the expenditure on drugs, etc., also cost of medical attendance.

At General Hospital :—

Cost of drugs, appliances, etc., per patient per day... $1\frac{1}{2}$ d.

At Smallpox Hospital :—

Cost of drugs, appliances, etc., per patient per day... $6\frac{1}{4}$ d.

This extra cost is due to the fact that the smallpox cases were many of them of a severe type, followed by abscesses, etc., which required lint and surgical dressings.

COST OF MEDICAL ATTENDANCE.

Your Medical Officer of Health receives £20 per annum for attendance on the patients—128 in all.

Out of this he paid one guinea to the Junior House Surgeon of the Infirmary for assisting him by administering chloroform to a patient whom it was necessary to trephine for brain abscess following scarlet fever.

This leaves the sum actually received by your Medical Officer of Health for medical attendance at £18 19s. for the year's work, which represents a fraction over one halfpenny per patient a day.

THE COST OF NURSING.

The cost of nursing has been excessively heavy, and I would here repeat what I said on pages 61 and 62 of my last Annual Report, which was as follows :—

“ Our present arrangement of engaging Nurses from private Nursing Homes as we require them is proving very expensive, and it would be much more economical, and very materially conduce to the better working of the Institution if we had two Assistant Nurses, one to take charge at night and one to help the Matron during the day, and to be on duty during her occasional necessary absences from the Hospital. We cannot engage fever Nurses under 2 guineas a week, whilst Assistant Nurses might readily be obtained at £30 to

£35 per annum. The cost of the nursing of smallpox cases is even greater; trained nurses, and no others, should be trusted with serious cases of sickness, require 3 guineas a week. This after six or eight weeks becomes a serious item, and is nearly equal to a year's salary for an Assistant Nurse attached to your Hospital."

One permanent Assistant Nurse has been engaged at a salary of £30—Miss Isabella Dixon, of Darlington. She has so far proved very satisfactory. I must, however, point out that two nurses are quite insufficient to nurse more than four or five cases of one variety of infectious disease. The same nurse cannot attend on two varieties of infectious disease without acting as a medium for conveying infection, and therefore, unless you have as a minimum two Assistant Nurses, you will have to resort to the old expensive and unsatisfactory expedient of hiring Nurses as you require them. I trust this matter will receive your serious consideration.

Your Hospital at present holds 26 beds and 6 cots, and there can be isolated three varieties of infectious disease. In addition you have twelve beds—six male and six female—in the Smallpox Hospital, which gives a total of 37 beds and 6 cots.

NATURE OF THE CASES TREATED.

SCARLET FEVER—101 cases.

Many of these cases were of a severe type, and two died within 24 hours of admission. Three of the cases were *Scarlatina Maligna*, a terribly severe form of the disease, followed by death in all cases. The children never exhibited any sign of reaction, but died from the intensity and virulence of the scarlatinal poison. Three cases were followed by mastoid abscess; in one case trephining was necessary for brain abscess (temporo-sphenoidal); two cases died of septic broncho-pneumonia; two cases were complicated by pulmonary tuberculosis, of which one died; one case had severe bronchitis. Nine were followed by nasal discharge; in four of these cases Hoffmann's pseudo-diphtheria bacillus was found. Eight had ear discharge. Nine had albuminuria without much clinical evidence of Bright's disease. Four had acute scarlatinal nephritis. One child had a modified form of gangrenous stomatitis.

Two were removed from the Infirmary suffering from burns, complicated by scarlet fever; two suffering from heart disease; one had a wound, and one suffered from ophthalmia.

A very casual acquaintance with these diseases will enlighten anyone as to the amount of nursing and care such serious complications have required.

No case is sent out of hospital with any visible discharge from nose or ears, and to this I attribute our freedom from "Return cases." The nature of the disease has not always been obvious when first some of the patients were received in hospital.

German measles, "the fourth disease," mixed infections, septic rashes, diphtheria with septic rash, all have played their part in confusing the diagnosis, and we have had to exercise much care in this matter, which has given no small amount of anxiety to the medical officer in charge of these patients.

DIPHTHERIA.

All cases admitted as diphtheria receive 4,000 units of antitoxin immediately on admission. A swab is taken from the throat and nose and sent at once to the Lister Institute for examination.

The value of early treatment by anti-diphtheria serum is that if the case should not prove to be one of diphtheria the patient is protected by the immunising effect of the serum, and runs no risk of acquiring the disease although in a diphtheria ward.

In the case of swabs sent from the Hospital, I ask the Lister Institute to inform me not only whether true diphtheria bacilli are present, but also as to the presence or absence of Hoffmann's bacillus and streptococci. We had a small epidemic of sore throat associated with the presence of Hoffmann's bacillus and streptococci, and certainly this type of throat spread through the ward. The relationship of Hoffmann's pseudo-diphtheria bacillus to the true Klebs-Loeffler bacillus is most interesting.

FEES RECEIVED FROM PATIENTS IN THE GENERAL ISOLATION HOSPITAL DURING THE YEAR 1903.

£105 14s. 10d. has been received for the maintenance, medical attendance, etc., of patients during the year.

Of this sum £93 has been received from the Board of Guardians and War Office.

CONDITIONS AS TO ADMISSION OF PATIENTS TO THE HOSPITALS.

A joint Committee, consisting of members of the Health Committee and Finance Committee, met to consider the arrangements as to the charges for the maintenance of patients in the Hospitals. It was resolved that the Council be recommended not to make any

charge, in future, for the maintenance and treatment of persons suffering from smallpox, other than those received on behalf of public authorities.

It was also resolved that the Council be recommended not to make any charge for infectious cases admitted to the Isolation Hospital, where in the opinion of the Medical Officer of Health there is not proper lodging or accommodation for isolation, with the exception of cases received on behalf of public authorities or cases admitted on the request of any person who undertakes to pay.

The conditions upon which cases are received into the Smallpox Hospital from the Workhouse was decided earlier in the year, as follows :—

That, provided the Medical Officer of Health considers there is sufficient accommodation, the terms for allowing smallpox cases arising within the Workhouse to be treated at the Smallpox Isolation Hospital be one guinea per day per case.

Negotiations were commenced during the year between the Health Committee and the Bollington Urban District Council, the latter Authority wishing to reserve two beds in the Smallpox Hospital for cases of smallpox arising within the Bollington Urban District. It was finally decided that the charges should be an annual rent of £20, and five guineas weekly for the first patient, and nine guineas for two. Such charges, however, did not include the removal of the patient to and from the hospital, nor medical attendance whilst a patient therein. At a subsequent meeting the Medical Officer of Health stated that for an annual fee of ten guineas he would undertake the medical attendance on such patients.

At the time of writing this Report the negotiations had not been completed.

HOSPITAL SUB-COMMITTEE.

During the year a small Sub-Committee of the Health Committee was appointed to undertake the general supervision of the Hospitals. Mr. Councillor Malins is the Chairman.

THE SMALLPOX HOSPITAL.

Number of cases admitted during the year 1903...	21
Number of deaths in hospital	3

One patient was confined of a male child whilst in hospital.

CONDITION AS TO VACCINATION, &c.

No.	Sex.	Age.	Vaccinal Condition.	Remarks.
(1)	M.	31.	Infantile vaccination only. Two good marks on right arm and one small one on left.	The type of disease was discrete.
(2)	M.	31.	Infantile vaccination only. Two good foveated scars on left arm, one 3 inches long $\frac{1}{2}$ in. width, one $1\frac{1}{2}$ inches long.	Very discrete one, a few pustules all over body.
(3)	F.	19.	Infantile vaccination only. Three scars, two on left arm, $1\frac{1}{2}$ sq. inches; slightly foveated; one on right arm $\frac{1}{2}$ sq. inch.	Semi-confluent.
(4)	F.	50.	Infantile vaccination only. Vaccination seems difficult to see.	Confluent.
(5)	M.	33.	Infantile vaccination only. One poorly-defined mark on left arm only, $\frac{1}{2}$ inch in diameter.	Discrete.
(6)	M.	40.	Infantile vaccination only. Two scars on left arm; one 1 sq. inch, foveated; one ill-defined and smaller.	Confluent.
(7)	M.	3 days.	Son of patient No. 3. Born when mother was covered with papules. Not vaccinated. Rash appeared 12th day after birth. Disease, severe confluent; result, death.	
(8)	M.	47.	Infantile vaccination only. Two marks on left arm; one $\frac{1}{2}$ sq. inch., indistinct; one 1 sq. inch., fairly distinct. Not foveated.	Severe confluent, deep abscesses. Ear disease.
(9)	M.	24.	Infantile vaccination only. Three scars, all foveated; two about $\frac{1}{2}$ sq. inch, one $\frac{1}{2}$ in. in breadth and 1 in. in length.	Discrete, but deep pastules.
(10)	M.	42.	Infantile vaccination only. One small, indistinct mark on left arm, about $\frac{1}{2}$ inch in diameter.	Discrete.

No.	Sex.	Age.	Vaccinal Condition.	Remarks.
(11)	F.	34.	Infantile vaccination only. One small scar on left arm, indistinct; not foveated; $\frac{1}{2}$ inch in diameter.	Very discrete.
(12)	M.	32.	Infantile vaccination only. Two scars, one $1\frac{1}{2}$ inch square, one 1 inch square; both foveated.	Not variola.
(13)	F.	18.	Infantile vaccination only. Four marks; two about 1 sq. inch, two about $\frac{1}{2}$ sq. inch; all foveated.	Very discrete.
(14)	F.	66.	Re-vaccinated in four places March 27th, all four places taking well. Began with back-ache, etc., April 6th, ten days after vaccination. Vaccinated during incubation period, a "too late" case.	Discrete and mild.
(15)	F.	36.	Infantile vaccination only. Two marks on left arm, each about 1 sq. inch, and foveated.	Very severe confluent. Death ensued.
(16)	F.	44.	Infantile vaccination only. Two small marks; one about $\frac{1}{4}$ sq. inch, one about $\frac{1}{8}$ sq. inch; both foveated.	Severe confluent.
(17)	M.	37.	Infantile vaccination only. One small mark on left arm, about $\frac{1}{8}$ sq. inch; not foveated.	Semi-confluent.
(18)	F.	42.	Infantile vaccination only. Two marks on left arm, each about $\frac{1}{8}$ sq. inch. Slightly foveated.	Semi-confluent.
(19)	M.	42.	Infantile vaccination only. One indistinct mark on left arm, $\frac{1}{4}$ sq. inch. Not foveated.	Semi-confluent.
(20)	M.	23.	Infantile vaccination only. Four good marks on right arm, one about 1 sq. inch, three about $\frac{1}{2}$ sq. inch each. All foveated.	Discrete, but deep postules.

No.	Sex.	Age.	Vaccinal Condition.	Remarks.
(21)	F.	40.	Infantile vaccination only. Three marks on left arm, about $\frac{1}{4}$ sq. inch each in area. None foveated.	Severe confluent. Patient was confined whilst in hospital. Child died.

The one striking feature about this epidemic was that although re-vaccination had been most extensively resorted to by all classes of people within the Borough, not one of all this large number of recently re-vaccinated people contracted the disease excepting case No. 14, who was re-vaccinated after contracting smallpox.

It is a very strong argument in favour of obligatory re-vaccination at school age, which I sincerely trust will become law. Smallpox epidemics will then be unknown.

THE DISINFECTOR.

During the year the Thresh Current Steam Disinfector has proved most valuable. It is difficult to conceive what we should have done without it, particularly during the earlier months of the year, when smallpox and scarlet fever were prevalent.

The following table shows some of the work it has done :—

Number of beds disinfected by steam	187
„ „ pillows disinfected by steam	358
„ „ Blankets and counterpanes disinfected by steam	263
„ „ Carpets, etc., disinfected by steam...	102
„ „ Articles of clothing disinfected by steam	4628

Had all these articles been burnt it is difficult to estimate the amount of compensation which would have had to be paid to the owners.

THE AMBULANCE.

Last year, in my Annual Report, I called attention to the great need of a new Ambulance for the removal of persons suffering from infectious disease to hospital. I regret to say that nothing has yet been done in the matter.

The present arrangement is not a credit to the town. Its only possible claim to respect is on account of its antiquity.

It might very well be used for the removal of infected clothing, bedding, etc., to the Disinfector. I trust this matter may receive your early attention, as I am convinced that to remove severe cases of illness to hospital in your present Ambulance inflicts needless suffering on the patient.

DISINFECTION.

We have continued using the formic-aldehyde spray (Dr. McKenzie's). We use a 5 per cent. solution of formalin in water. (Formalin is a 40 per cent. solution of formic-aldehyde gas in water.) This spraying of infected rooms is, I am convinced, much superior to mere aerial disinfection with either sulphur or formalin as a gas, though we do occasionally combine formalin vapour with spraying. However, if spraying is to be efficient, it must be thorough, that is to say, every exposed surface must receive a liberal spray of the disinfectant. Our routine method of disinfection is now to remove the infected bedding, clothing, etc., to the Thresh Disinfector, and then to liberally spray the rooms, and afterwards leave a formalin lamp burning for some hours.

WATER SUPPLY.

The water supply during the year has been abundant. At the beginning of June I received complaints as to the quality of the water from silk dyers and others. The complaint was that the water contained a greenish, slimy sediment, with particles of sand.

Samples of the material strained out of the water through calico were submitted to me on several occasions. The material appeared to be of the nature of a low form of vegetable growth (zoglea).

CHEMICAL ANALYSIS.

I submitted five samples of water to the Borough Analyst (Mr. Estcourt, F.C.S., etc.). Three were taken on June 9th; two were taken June 11th. The samples taken on June 9th: One from the Butter Market; one from Mr. Cameron's factory, and one of Hurdsfield water, from the Royal Oak, Hurdsfield. The samples taken on the 11th: One was from a private house in Great King Street; one was from Mr. Cameron's factory.

The chemical analysis was to the effect that the water was of excellent quality. The vegetable organisms not unusually present in the pipes of all water supplies are no doubt due to the extra pressure in the filter beds, owing to which they sometimes escape into the pipes.

BACTERIOLOGICAL EXAMINATION.

On June 15th I submitted further samples to the Lister Institute of Preventive Medicine for Bacteriological Examination. I append the Report I received thereon:—

Jenner Institute of Preventive Medicine,

July 7th, 1903.

Report on examination of water samples received from Macclesfield Health Committee on June 16th, 1903, per Dr. Marsh, Medical Officer of Health Macclesfield:

No. 1.—“From Mount Hollins Road, from main, before filtration, but after passing through sedimentation Reservoir.”

Total number at 22° C. 7500 per cc.

Bacillus Coli present in 1 c.c.

No. 2.—“Hurdsfield private water supply.”

Total number at 22° C. 730 per c.c.

Bacillus Coli present in 20 c.c.

No. 4.—“Town’s water after filtration, etc.”

Total number at 22° C. 1850 per c.c.

Bacillus Coli present in 1 c.c.

The analysis shews that all these waters are liable to pollution. The source of the contamination should be sought for, and, if possible, removed.

ALFRED MACCONKEY,

PRO DR. MACFADYEN.

It is important in considering this question to bear in mind that similar samples were taken about 12 months previously, and in none of these was the Bacillus Coli Communis found. Again, the numbers of organisms present in the water per c.c. were much less.

HOLLINS MOUNT WATER.

Number of organisms per cubic centimetre :—

Year 1903.	Year 1902.
7,500 per c.c.	75 per c.c.
Bacillus coli present.	Bacillus coli absent.

HURDSFIELD WATER SUPPLY.

Number of organisms per cubic centimetre :—

Year 1903.	Year 1902.
730	120
B. coli communis present.	B. coli communis absent.

TOWN'S WATER AFTER FILTRATION, Etc.

Number of organisms per cubic centimetre :—

Year 1903.	Year 1902.
110	1850
B. coli communis present.	B. coli communis absent.

The Medical Officer of Health and Waterworks Engineer went over the filter beds, and it certainly appeared that the beds were over taxed, and that the rapid growth of scum on the beds, due to a low form of vegetable life which scum produces, a jelly-like substance, on the surface of the sand of the bed and forms a most valuable filtering material, had frequently been scraped off, as owing to the demand for water this filtering scum had materially hindered the rapid passage of water through the bed.

Consequently, rapid passage through the bed had been secured at the expense of efficient filtration. This certainly points to the urgent necessity for a greater filtering area.

Again one of the large surface reservoirs is uncovered, and with the growth of the town in the direction of Buxton, soot and dust tend to accumulate on the surface of the filtered water.

The danger from dust is perhaps greater from a public health point of view than from soot.

In July the Water Committee made their annual inspection of the Waterworks, commencing at the Round Fountain,

which continues in excellent condition, and to afford a good supply of the purest water, this portion of the works always evoking the admiration of new members of the Committee, viewing it for the first time. Passing on the Filter Beds, these were observed to be taxed above their capacity, and some concern was manifested at seeing smoke deposits and scum floating on the surface of the beds. Note was made of the urgency for providing additional filters, seeing that the one now empty had only been worked for 10 days and required the top layer of sand renewing, thereby causing extra expenditure by the frequent skimming and renewing of the sand. Proceeding to the Service Reservoir the need for lining the same with white glazed bricks and the covering in of the same, was more urgent than ever, seeing that during the last six weeks it had been cleaned out four times, and was again becoming foul, whereas formerly it was only cleaned out half-yearly. On viewing Ledbetters Reservoir it was remarked that the enormous deposit of mud and vegetable growth needed clearing out at once; the pitching is in a dilapidated condition, and should be attended to without delay. On reaching Langley the Tegsnose and Bottoms Reservoirs were inspected, the former having been lowered to about 13 feet, whereas the Bottoms Reservoir contained about 28 feet. The Tegsnose Reservoir has at the inlet a considerable accumulation of mud, which should be cleaned out in the near future. The gauge basin and valve house adjoining were found to be in their usual efficient state, the floor of the latter being perfectly dry, and the measuring basin to be sending down to the river the usual daily flow of 800,000 gallons. Arriving at the Ridgeway Reservoir, an inspection was made of the several sources of pollution from the newly acquired farm as subsequently reported on by the Sub-Committee.

The Committee also took in hand the work of preventing the pollution of the Ridgeway Reservoir, the cause of which was principally due to a stream running near the Ridgeway Farm, purchased last year by the Corporation with a view to preventing the reservoir being polluted.

SCAVENGING AND NIGHTSOIL REMOVAL.

During the year the nightsoil foreman has been changed, a fresh man being appointed.

DANGER OF TIPS.

The major part of our nightsoil and dry-ash refuse is deposited at the Danes Moss tip, and a certain quantity is sold to farmers. The danger of all tips in the neighbourhood of towns is, that as the area of a town increases, these muck-heaps often become the

sites for building long before natural agencies have succeeded in purifying the "made soil."

The following Table gives the nightsoil return for the last 15 years :—

Year.	Number of Loads.		Expenditure.		
			£	s.	d.
1888	10,338		821	18	7
1889	10,295		933	16	4
1890	8,523		847	13	9
1891	10,187		1,328	9	10
1892	9,957		1,521	8	6
1893	10,975		1,837	1	9
1894	12,703		1,714	15	8
1895	12,289		1,652	16	8
1896	12,407		1,807	12	6
1897	13,283		2,006	2	3
1898	13,619		2,104	2	4
1899	13,040		2,169	16	10
1900	12,057		2,093	10	0
1901	11,215		2,425	14	2
1902	12,532		2,334	10	9
1903	11,912		2,260	10	5

The expenditure includes the cost of the Danes Moss Farm.

THE PRIVY MIDDEN.

Privy middens in towns are always bad, but when formed by the walls of kitchens and sculleries, or directly beneath the windows of bedrooms, sculleries, and kitchens, they most injuriously affect the health of a district. All persons subjected to such influences suffer from a general condition of lowered health, and become a ready prey to any disease going.

The effect on young children is most serious, and privy-midden towns always present a much higher rate of infantile mortality than towns where the water carriage system is in vogue.

The periodical cleansing of these foul abominations is necessarily attended by a great exaggeration of the nuisance which is ever present.

The Medical Officer of Health for Birmingham says:—"Quick removal of all kinds of filth from dwellings is the doctrine of modern sanitation," hence the water-carriage. Again he says:—"The privy system where fœcal matter is retained for months, is a survival of the dark days of 'Hygiene,'" and he has no hesitation in saying that all privy systems are bad; they not only pollute the outer air, but also the ground air and water.

Dr. Sergeant, the Medical Officer of Health for the County of Lancashire, says:—"In the absence of a water-closet, the privy receptacle receives the discharges from Typhoid Fever patients, and that the germs of this disease rapidly multiply in privy middens."

From observations made by Dr. Boobyer, of Nottingham, during the ten years 1887 to 1896, he found that of the houses attacked with Typhoid Fever, 1 in every 37 had a privy midden, 1 in every 120 had a pail closet, and only 1 in every 558 had a water-closet.

Authorities desiring to rid themselves of these foul privies, would do well to obtain private powers for that purpose, and the tendency of the Local Government Board is to assist in this direction, as evidenced by the large number of Corporations who have been granted private powers to require owners to abolish privy systems in favour of water-carriage.

The insanitary group of privy-middens in the Dams, upon which the Sanitary Inspector reported fully in my last Annual Report, is still in the same disgusting condition. In these privies, surrounded by houses in the middle of a large, unpaved back-yard, where women dry their clothes and children play, are stored the discharges from 165 persons, along with the garbage and refuse from 34 houses. As the place is at present, it is dangerous to the public health, an eyesore to the neighbourhood, in short, the condition of this common back-yard is an unmitigated nuisance which demands the urgent attention of the Sanitary Authority.

BACK-YARDS.

It is most important that every dwelling-house should have at the rear a sufficiency of space free from buildings. This space should be well paved or asphalted, and the surface properly sloped to a trapped gully. Slopstone pipes should discharge free from the house wall upon a properly trapped gully. The above sentences must not be considered a counsel of perfection, but, on the contrary, a necessary adjunct which every property owner should be compelled to provide, and every tenant should be compelled to keep in proper order and repair.

The crowding of small back-yards with dog kennels, rabbit hutches, hen pens, pigeon cotes, etc., should not be permitted, though in some districts of Macclesfield it extensively prevails. This crowding up of back-yards reduces the air and light space at the rear of dwellings, it militates against domestic cleanliness by occupying the drying ground for the household washing; it permits fæcal matter from animals to contaminate the air and ground around the sculleries and kitchens, where food is prepared and eaten.

If the yard is badly paved and drained all these conditions are made ten times worse. It is then impossible to cleanse the yard by swilling. The rear of the house is always damp, and food kept in sculleries readily goes mouldy and decays. The general effect on the health of the inhabitants is bad, and it tends to a lowering of the health and a diminution in the resisting power against disease.

SEWERING.

The following is a list of the streets sewered during the year :--

Green Street.

Glegg Street.

Thornicroft Street.

The new street, continuation of Westminster Road.

Black Road, from Mount Terrace to Hollands Place.

SEWAGE DISPOSAL WORKS.

Early in the year the Borough Engineer reported that it was necessary that a reply should be sent to the letter of the Mersey and Irwell Joint Committee, as to the nature of the new works intended to be carried out for the treatment of the sewage of the Borough, and explained his position with reference to the resolution of August 13th last as to preparing plans and estimates for laying down a series of bacteria beds, with a view to borrowing the money, and suggested that a specialist be called in to advise on the drawing up of a scheme for the treatment of the sewage on the septic tank and bacteria beds system, as the Inspector of the Joint Committee was in favour of this mode of treating the sewage.

In February it was resolved that Messrs. Aldermen Bradley and Brocklehurst, Councillors Brown, Cross, Oldfield, and Sinnott be appointed a Sub-Committee to visit, along with the Town Clerk and Borough Engineer, the Sewage Works at Salford, carried out

by Mr. G. R. Strachan, and those at Rotherham, carried out by Mr. R. E. W. Berrington, and to report the result of such visits to the Health Committee.

After visiting several towns and inspecting their Sewage Disposal Works, and after considering the advice and estimates of the respective Engineers, it was resolved that Mr. R. E. W. Berrington, C.E., be appointed Engineer to prepare plans and specifications for carrying out the scheme for the improvement of the Sewage Outfall Works at Butley.

In April a letter was received from the Clerk to the Mersey and Irwell Joint Committee stating that an extension of three months had been granted, so as to enable the Council to submit their proposed scheme for improving the effluent from the Butley Sewage Works.

On October 19th the Town Clerk applied at the Borough Police Court for an extension of the Order of Court, and he undertook, on behalf of the Corporation, that they would without any delay carry out the scheme for alterations at the Sewage Disposal Works, which had been drawn up by Mr. R. E. W. Berrington and adopted by the Council. The Bench thereupon extended the Order until the 30th of June, 1904.

The scheme proposed by Mr. Berrington is briefly as follows:—

He proposes to increase the capacity of the Butley Works so as to enable them to deal with a normal flow of 30 gallons per head of population of 34,635, or 1,039,050 gallons in 24 hours.

Ample tank accommodation is to be provided.

	Gallons.
Present tank capacity	482,962
Capacity of new tanks required to make provision equal to one day's flow	556,088
	<hr/>
	1,039,050
	<hr/>

After passing the tanks the tank effluent is delivered on to circular filters working continuously with automatic arrangements from a measuring tank. The filters to be worked at a rate not exceeding two hundred gallons of effluent per square yard of filter, or about 3,195 square yards of filter for the normal sewage flow. However, in order to comply with the Local Government Board's

requirements that the Local Authority must treat three times the normal flow on filters, about 10,000 square yards of filter will be necessary.

Mr. Berrington is of opinion that there is nothing in the sewage prejudicial to bacterial treatment, and that with the tanks and filter beds as described, previous chemical treatment of the sewage will be unnecessary.

COST OF SCHEME.

Building of tanks and filters, and re-arranging
present Works £14,000

This item, at $5\frac{1}{2}$ per cent. to cover principal and interest, will entail a yearly payment of £770. He believes that the maintenance of the new Works on bacteriological lines, plus the payment to cover principal and interest, will amount to £1,388, the sum actually spent in 1902 on the treatment of sewage at Butley.

Mr. Berrington adds: "Briefly then, your Council may reasonably expect to construct the necessary works, and to purify the sewage without any additional burden."

HOUSING OF THE WORKING CLASSES ACT, 1890.

No Report has been made during the year under either Part I. or II. of this Act by the Medical Officer of Health.

COMMON LODGING-HOUSES.

A Common Lodging-house is a house in which persons of the poorest class are received for short periods, and although strangers to one another, are allowed to inhabit one common room.

Number of nightly lodgers accommodated at the
Common Lodging-houses during the year... 31,406

Number of nightly lodgers accommodated at the
Common Lodging-houses last year 32,891

Number of visits paid to Common Lodging-
houses by the Sanitary Inspectors 399

In view of the fact that smallpox invaded two of these houses during the year, they were kept under strict supervision. Many of them are old-fashioned, and in spite of the keepers' desire to keep them clean, they are structurally unsuitable for the purpose for which they are used.

One house has been registered during the year, and certainly if the Sanitary Authority take no steps to provide a Municipal Common Lodging-house, it seems better to register as many as it is reasonably possible for them; we have some amount of control over the keepers.

Although there is an apparent decrease in the number of nightly lodgers accommodated as compared with last year's figures, I do not think there has been any actual decrease. Many lodgers find accommodation at unregistered houses, and of these we have no information.

I trust the Corporation will seriously consider the erection of a house in the town. It would be in the interests of decency, health, and morality.

If it is not over-capitalised at its commencement, I believe a Municipal Lodging-house, so far from being a burden on the rates, would show a profit.

FACTORY AND WORKSHOPS ACT, 1902.

Section 132 of this Act is as follows:—

“The Medical Officer of Health of every District Council shall, in his annual report to them, report specifically on the administration of this Act in workshops and workplaces, and he shall send a copy of his annual report or so much of it as deals with this subject to the Secretary of State.”

At the meeting of the Committee held in January, Mr. D. Walmsley (Factory Inspector of the district) attended, and explained his views to the Committee as to the measures necessary to enable the Corporation to carry out Secs. 14, 15 and 16 of the Factory and Workshops Act, 1901, with reference to certifying that proper means of escape are provided at the mills and workshops in the Borough. After drawing the Committee's attention to the fact that three factories had been recently built without a certificate being given, also that there were several mills where the staircases were narrow and no outside means of escape provided; he suggested that all the mills and workshops in the Borough should be systematically visited and special notes made of the structure of the building, the class of work carried on, a description of the places of ingress and egress, whether secondary staircases are provided, or outside escapes. These particulars when obtained to be entered up in a register for the use of the Fire Brigade, who no doubt would find them very useful. The Inspector also explained that in other towns the duty of inspecting and giving the Certificates had been put under the Surveyor's department, and after the matter had been considered, it was resolved that, as recommended by the Factory Inspector, the matter be referred to the Highway Committee for them to deal with.

The Highway Committee formed a Sub-Committee called "Fire Escape (Buildings) Sub-Committee." At a meeting of this Sub-Committee, held in August, two notices received from His Majesty's Inspector of Factories as to the means of escape in case of fire at the Dee Mill and Depot Mills having been read, it was resolved that the Surveyor be requested to report as to the means of escape in case of fire at the Dee Mill and Depot Mills, and that such report be laid before the Highway Committee.

LIST OF WORKSHOPS.

The following is a list of workshops, kindly supplied by the Factory Inspector, March, 1904:—

	Number of Work Places.
1. Breadmakers	20
2. Dressmakers	20
3. Milliners	16
4. Confectioners	10
5. Tailors	9
6. Silk Weavers	7
7. Clog-makers	6
8. Tinsplate-workers	6
9. Cabinet-makers	5
10. Card-cutters	4
11. Brush-makers	3
12. Bootmakers	3
13. Stonemasons	3
14. Saddlers	3
15. Bottling	2
16. Box-makers	2
17. Carriage-builders	2
18. Joiners	2
19. Knitting	2
20. Skip-makers	2
21. Wheelwrights	2
22. Builder	1
23. Caramel-maker	1
24. Coppersmith	1
25. Cycle Repairer	1
26. Marine Store-dealer	1
27. Paper Stock	1
28. Rope-maker	1

Total number of Workshops 136

24 visits have been paid to Factories and Workshops by the Sanitary Inspectors during the year. This cannot be considered sufficient sanitary supervision; possibly the extra pressure of work due to the outbreak of smallpox accounts for the comparative fewness of these visits. It is most important in the interests of the working classes that the provisions of this Act should be efficiently carried out. As much of the work in workshops and factories is in the hands of women, it is most important that the sanitary surroundings should receive special consideration. The health and well-being of the next generation is immediately dependent on the good physique of the present race of young women and girls, and this requires that they should work in healthy surroundings and be fed on nutritious food. You cannot expect grapes from thorns nor figs from thistles, and a strong, vigorous race of men and women cannot be reared from women whose life is spent in a close, vitiated atmosphere, and whose staple article of diet are strong tea, bread and butter, potatoes, and sweet stuff.

Two complaints have been received from the Factory Inspector during the year, one relating to the walls of a workshop which required limewashing, and one to a factory where the sanitary accommodation for females was deficient.

LISTS OF OUTWORKERS.

The attention of all persons employing out-workers should be called to Section 107 of the Factory and Workshop Act, 1901 :—

The occupier of every factory and workshop and every place from which work is given out, and every contractor employed by any such occupier in the business of the factory, workshop or place, must keep in the prescribed form and manner with the prescribed particulars lists showing the names and addresses of all persons directly employed by him either as workmen or contractors, in the business of the factory, workshop, or place outside the factory, workshop, or place, and the places where they are employed. Copies of such lists must be sent on or before the 1st February and the 1st August in each year to the District Council of the district in which the factory, workshop, or place is situate.

The classes of work to which the above provisions apply are the following :—

The making, cleaning, washing, altering, ornamenting, finishing, and repairing of wearing apparel and any work incidental thereto.

The making, ornamenting, mending, and finishing of lace, and of lace curtains and nets.

Cabinet and furniture making and upholstery work.

The making of electro plate.

The making of files.

Fur pulling.

The prescribed forms of lists may be obtained either directly or through any bookseller, from

EYRE AND SPOTTISWOODE,

East Harding Street,

London, E.C.

It is very probable that the number of firms employing outworkers engaged in the occupations which it is necessary twice a year to forward the names and addresses of those outworkers, is considerably in excess of those who actually sent in those lists during the year.

I, therefore, again suggest that in order to direct attention to the requirement of the Act an advertisement should be inserted in the local papers.

UNSOUND MEAT.

On several occasions your Medical Officer of Health and Sanitary Inspector have been voluntarily invited to inspect samples of meat which the butchers thought suspicious or actually diseased, no less than 2,400 pounds being inspected and destroyed.

In two cases proceedings were taken, and in both a conviction obtained, in one case a fine of £5 was inflicted, and in another a fine of £10 or two months' imprisonment, the justices at the same time expressing their determination to do all in their power to stop the traffic in "slink" meat.

The Health Committee passed a resolution authorising their officials to take proceedings under Section 117 of the Public Health Act of 1875, or the Macclesfield Corporation Act of 1882 relating to unsound meat and other articles, where in their opinion there is a "prima facie" case to be dealt with, without previously reporting the matter to the Health Committee.

A similar resolution has previously been passed relating to the Sale of Food and Drugs Acts, etc.

BAKEHOUSES.

There are fifty bakehouses within the Borough, including two underground bakehouses. The Medical Officer of Health inspected these underground bakehouses, and reported them both to the Health Committee as unsuitable for registration and certification. Accordingly, early in June notice was given to the owners that the Health Committee cannot grant a certificate for such bakehouses under Section 101 of the Factory and Workeshop Act of 1901.

127 visits have been paid by the Sanitary Inspectors to the bakehouses during the year.

A complaint has been received from the Factory Inspector respecting the removal of refuse through a bakehouse. This matter is now under investigation.

DAIRIES, COWSHEDS, AND MILK-SHOPS.

61 persons are registered as Cowkeepers, Dairymen, or Purveyors of Milk.

43 as Cowkeepers, Dairymen, and Puveyors of Milk.

11 „ „ and Purveyors of Milk.

6 „ Purveyors of Milk.

1 „ Dairyman and Purveyor of Milk.

Additional measures are still required to secure the cleanliness of a large part of our milk supply.

Chemical analysis of milk does nothing to disclose the dirt so often visibly present. What is required is a fixed bacteriological standard beyond which the number of micro-organisms found in milk ought not to go. Many of the dairymen in New York supply a milk which is certified to contain not less than 3.5 per cent. of fat, not exceeding 0.2 per cent. of acidity, and not to contain more than 30,000 bacteria per cubic centimetre. The milk meets with a ready demand at one cent. per American quart above the ordinary price.

If four pence a quart were charged for a guaranteed clean milk, I do not believe that the wealthy and middle class would object to pay for this safeguard.

The requisites for a proper supply of good, clean milk are :—

Keeping good, healthy cows, and feeding well.

Keeping the cows and premises clean.

Thorough cleanliness of hands and udder at milking time.

Efficient and quick cooling of milk after milking.

INSPECTION OF CANAL BOATS.

Our Inspector of Nuisances is also Inspector of Canal Boats under the Acts of 1877 and 1884.

BOROUGH OF MACCLESFIELD.

THE CANAL BOATS ACTS, 1877 & 1884.

To the Local Authority of the Borough of Macclesfield.

Gentlemen,—I respectfully beg to submit to you my annual report on the work done within your Authority during the year ending 31st December, 1903, as required by Section 3 of the Canal Boats Act, of 1884.

I have inspected 66 Boats, 54 of which were complying with the Regulations of the Local Government Board in a satisfactory manner. On the remaining 12 the following infringements were met with, viz.: Two had dirty cabins, two leaked and required painting, six were without Certificates of Registration. Two were not properly marked. Four had no water vessel, one had a dirty water vessel, and another the water vessel was not of sufficient capacity.

The whole of the above infringements have been followed up and rectified, and also those standing over at the end of last year.

This has necessitated the serving of 16 notice forms and 12 other communications.

The foregoing inspections necessitated 78 visits to the canal.

One case of Infectious Disease was dealt with, viz., Typhoid Fever. The boat was detained and thoroughly disinfected.

The Cabins of the above 66 boats were registered to accommodate 186 adults, and six certificates were not produced. There were occupying 130 male adults, 10 females, and 7 children.

I received a visit from His Majesty's Inspector (Owen J. Llewellyn, Esqr.) on the 13th November, when he went through the work of the year, and afterwards visited the Canal with me, making several inspections.

I remain, Gentlemen,

Your obedient Servant,

WILLIAM JENKINS,

Inspector of Canal Boats.

NEW DWELLING HOUSES.

The following is a list of plans of new dwelling houses approved during the year 1903:—

- 2 houses in Cottage lane, Buxton Road.
- 1 house and shop in Hibel Road.
- 2 houses in Pool Street.
- 4 houses in Windmill Street.
- 8 houses in Hobson Street.
- 1 house in Pownall Street.
- 2 houses in Barracks Lane.
- 5 houses in North Street, Buxton Road.

6 houses in Chester Road.

1 house in Bond Street.

2 houses in Buxton Road.

Total—34 houses and one shop.

Last year plans for 13 houses only were passed.

8 of the proposed houses are in West Macclesfield.

12 „ „ „ „ „ „ East Macclesfield.

14 „ „ „ „ „ „ Sutton.

More attention should be paid to the Bye-law which requires that every person who erects a new domestic building shall cause the whole ground surface or site of such building to be properly asphalted or covered with a layer of good cement concrete, rammed solid at least six inches thick. The importance of this Bye-law is not realised. Residence on a damp subsoil favours the onset of phthisis, and all the complaints known as rheumatic.

All grounds contain air often foul, which when there is no layer of concrete is drawn into the house by the direct insuction which fires exert. Where there is soakage of filth from a leaky drain or privy-midden, the danger to health is very great, because insidious and not suspected.

Constant sore throat or colds in the head, a general condition of lowered vitality, are the common accompaniments of living in houses which are foul-air traps. The extra cost involved in adopting this very necessary precaution is not great, seeing that a cubic yard of concrete costs perhaps from ten to fifteen shillings, and at six inches thick will cover an area of fifty-four square feet.

I have the honour to remain,

Gentlemen,

Your obedient servant,

J. HEDLEY MARSH,

Medical Officer of Health.

SANITARY DEPARTMENT.

Health Office,

Town Hall,

Macclesfield.

SIR,

I beg respectfully to submit to you the following as a summary of work done by this department during the quarter ending 31st March, 1903.

Number of Complaints received at Office	129
„ „ Nuisances entered on the Books	210
„ „ Nuisances removed	213
„ „ Preliminary Notices and Letters	156
„ „ Statutory Notices served	7
„ „ Magistrates' Orders obtained	1
„ „ Persons summoned before the Justices for offences under the Public Health Act	1
„ „ Privies and Ashpits repaired and improved	9
„ „ Privies converted into Water-closets	34
„ „ New Closets built :—	
On W.C. system	1
On Waste Water system	0
On Privy system	1
„ „ House drains repaired and cleansed	30
„ „ Slopstone Pipes disconnected from the sewer.....	3
„ „ House Drains tested with Smoke Apparatus	17
„ „ Other Nuisances (not specified above) abated	15
„ „ Visits paid to Common Lodging-houses	110
„ „ Nightly lodgers accommodated at the Common Lodging-houses during the quarter	8,088
„ „ Visits paid to Factories and Workshops	4
„ „ „ „ „ Dairies, Cowsheds and Milkshops ...	55
„ „ „ „ „ Registered Slaughter Houses	84
„ „ „ „ „ Bakehouses	33
„ „ „ „ „ Dirty and Overcrowded Houses	45
„ „ Houses inspected in Sanitary Survey	6

The distribution of Lime-wash, Brushes, and Disinfectants to the Poor has been as follows :—

Lime-wash	103
Brushes lent for applying same	44
Disinfectants	1,072

Number of Houses specially inspected on account of Infectious

Diseases	85
„ „ Visits paid to same	275
„ „ Notices sent to schools and parents re the Isolation of children where infectious disease exists	230
„ „ Pails containing Typhoid excrement, removed, dis- infected and buried	10
„ „ Supplies of Disinfectants specially on account of Infectious Disease	95
„ „ Houses fumigated after Infectious Disease	78
„ „ „ „ „ deaths from Phthisis	0
„ „ Cases removed to Isolation Hospital	58
„ „ Contacts removed to Temporary Shelter	0
„ „ Beds disinfected by steam	66
„ „ Pillows disinfected by steam	131
„ „ Blankets and Counterpanes disinfected by steam...	116
„ „ Carpets disinfected by steam	34
„ „ Articles of Clothing disinfected by steam	1,532
„ „ Canal Boats inspected	8
„ „ Samples taken under the Sale of Food and Drugs Act, etc., submitted to the Borough Analyst ...	14
„ „ Persons proceeded against for offences under the Sale of Food and Drugs Act	0
„ „ Persons proceeded against under the Contagious Diseases Animals Acts	0

Diseased, Unsound, or Unwholesome food seized, and destroyed by Magistrates' Order :—

Beef, 476 lbs., and owner prosecuted.

Number of Licenses granted for the removal of Swine	83
„ „ Notices issued for the detention of Swine	0

I remain, Sir,

Your obedient Servant,

WILLIAM JENKINS.

Health Office,

Town Hall,

Macclesfield.

SIR,

I beg respectfully to submit to you the following as a summary of work done by this department during the quarter ending 30th June, 1903.

Number of Complaints received at Office	128
„ „ Nuisances entered on the Books	213
„ „ Nuisances removed	229
„ „ Preliminary Notices and Letters	169
„ „ Statutory Notices served	8
„ „ Magistrates' Orders obtained	1
„ „ Persons summoned before the Justices for offences under the Public Health Act	1
„ „ Privies and Ashpits repaired and improved	12
„ „ Privies converted into Water-closets	49
„ „ New Closets built :—	
On W.C. system	19
On Waste Water system	0
On Privy system	1
„ „ House drains repaired and cleased	52
„ „ Slopstone Pipes disconnected from the sewer.....	3
„ „ House Drains tested with Smoke Apparatus	45
„ „ Other Nuisances (not specified above) abated	7
„ „ Visits paid to Common Lodging-houses	91
„ „ Nightly lodgers accommodated at the Common Lodging-houses during the quarter	7,963

Number of Visits paid to Factories and Workshops	9
„ „ „ „ „ Dairies, Cowsheds and Milkshops ...	43
„ „ „ „ „ Registered Slaughter Houses	92
„ „ „ „ „ Bakehouses	28
„ „ „ „ „ Tripe-dressing places	17
„ „ „ „ „ Dirty and Overcrowded Houses	127
„ „ Houses inspected in Sanitary Survey	70

The distribution of Lime-wash, Brushes, and Disinfectants to the Poor has been as follows :—

Lime-wash.....	673
Brushes lent for applying same	336
Disinfectants	2,483

Number of Houses specially inspected on account of Infectious

Diseases	84
„ „ Visits paid to same	272
„ „ Notices sent to schools and parents re the Isolation of children where infectious disease exists	222
„ „ Pails containing Typhoid excrement, removed, disinfected and buried	0
„ „ Supplies of Disinfectants specially on account of Infectious Disease	126
„ „ Houses fumigated after Infectious Disease	68
„ „ „ „ „ deaths from Phthisis	0
„ „ Cases removed to Isolation Hospital	49
„ „ Contacts removed to Temporary Shelter	28
„ „ Beds disinfected by steam	66
„ „ Pillows disinfected by steam	131
„ „ Blankets and Counterpanes disinfected by steam...	116
„ „ Carpets disinfected by steam	34
„ „ Articles of Clothing disinfected by steam	1,532
„ „ Canal Boats inspected	12
„ „ Samples taken under the Sale of Food and Drugs Act, etc., submitted to the Borough Analyst ...	7
„ „ Persons proceeded against for offences under the Sale of Food and Drugs Act	1
„ „ Persons proceeded against under the Contagious Diseases Animals Acts	0

Food submitted for inspection and destroyed :—

Beef, 480 lbs.

Number of Licenses granted for the removal of Swine	121
„ „ Notices issued for the detention of Swine	0

I remain, Sir,

Your obedient Servant,

WILLIAM JENKINS.

Health Office,
Town Hall,
Macclesfield.

SIR,

I beg respectfully to submit to you the following as a summary of work done by this department during the quarter ending 30th September, 1903.

Number of Complaints received at Office	107
„ „ Nuisances entered on the Books	168
„ „ Nuisances removed	199
„ „ Preliminary Notices and Letters	153
„ „ Statutory Notices served	7
„ „ Magistrates' Orders obtained	0.
„ „ Persons summoned before the Justices for offences under the Public Health Act	0
„ „ Privies and Ashpits repaired and improved	22
„ „ Privies converted into Water-closets	36
„ „ New Closets built :—	
On W.C. system	7
On Waste Water system	0
On Privy system	0
„ „ House drains repaired and cleased	61
„ „ Slopstone Pipes disconnected from the sewer.....	6
„ „ House Drains tested with Smoke Apparatus	30

Number of Other Nuisances (not specified above) abated	12
„ „ Visits paid to Common Lodging-houses	94
„ „ Nightly lodgers accommodated at the Common Lodging-houses during the quarter	6,711
„ „ Visits paid to Factories and Workshops	6
„ „ „ „ „ Dairies, Cowsheds and Milkshops ...	60
„ „ „ „ „ Registered Slaughter Houses	96
„ „ „ „ „ Bakehouses	35
„ „ „ „ „ Tripe-dressing places	23
„ „ „ „ „ Dirty and Overcrowded Houses	70
„ „ Houses inspected in Sanitary Survey	0

The distribution of Lime-wash, Brushes, and Disinfectants to the Poor has been as follows :—

Lime-wash	283
Brushes lent for applying same	165
Disinfectants	2,154

Number of Houses specially inspected on account of Infectious Diseases	67
„ „ Visits paid to same	137
„ „ Notices sent to schools and parents re the Isolation of children where infectious disease exists	120
„ „ Pails containing Typhoid excrement, removed, dis- infected and buried	47
„ „ Supplies of Disinfectants specially on account of Infectious Disease	55
„ „ Houses fumigated after Infectious Disease	26
„ „ „ „ „ deaths from Phthisis	2
„ „ Cases removed to Isolation Hospital	13
„ „ Contacts removed to Temporary Shelter	0
„ „ Beds disinfected by steam	35
„ „ Pillows disinfected by steam	63
„ „ Blankets and Counterpanes disinfected by steam...	86
„ „ Carpets disinfected by steam	17
„ „ Articles of Clothing disinfected by steam	1,057
„ „ Canal Boats inspected	15
„ „ Samples taken under the Sale of Food and Drugs Act, etc., submitted to the Borough Analyst ...	6

Number of Persons proceeded against for offences under the Sale of Food and Drugs Act	0
„ „ Persons proceeded against under the Contagious Diseases Animals Acts	0
Food submitted for inspection and destroyed :— Beef, 640 lbs.	
Number of Licenses granted for the removal of Swine	93
„ „ Notices issued for the detention of Swine	0

I remain, Sir,

Your obedient Servant,

WILLIAM JENKINS.

Health Office,

Town Hall,

Macclesfield.

SIR,

I beg respectfully to submit to you the following as a summary of work done by this department during the quarter ending 31st December, 1903.

Number of Complaints received at Office	88
„ „ Nuisances entered on the Books	156
„ „ Nuisances removed	158
„ „ Preliminary Notices and Letters	168
„ „ Statutory Notices served	7
„ „ Magistrates' Orders obtained	1
„ „ Persons summoned before the Justices for offences under the Public Health Act	3
„ „ Privies and Ashpits repaired and improved	12
„ „ Privies converted into Water-closets	17
„ „ New Closets built :—	
On W.C. system	16
On Waste Water system	0
On Privy system	0
„ „ House drains repaired and cleased	41

Number of Slopstone Pipes disconnected from the sewer.....	0
„ „ House Drains tested with Smoke Apparatus	27
„ „ Other Nuisances (not specified above) abated	11
„ „ Visits paid to Common Lodging-houses	104
„ „ Nightly lodgers accommodated at the Common Lodging-houses during the quarter'	8,644
„ „ Visits paid to Factories and Workshops	5
„ „ „ „ „ Dairies, Cowsheds and Milkshops ...	48
„ „ „ „ „ Registered Slaughter Houses'	86
„ „ „ „ „ Bakehouses	31
„ „ „ „ „ Tripe-dressing places	19
„ „ „ „ „ Dirty and Overcrowded Houses	84
„ „ Houses inspected in Sanitary Survey	11

The distribution of Lime-wash, Brushes, and Disinfectants to the Poor has been as follows :—

Lime-wash	71
Brushes lent for applying same	35
Disinfectants	1,092

Number of Houses specially inspected on account of Infectious Diseases	38
„ „ Visits paid to same	108
„ „ Notices sent to schools and parents re the Isolation of children where infectious disease exists	96
„ „ Pails containing Typhoid excrement, removed, dis- infected and buried	36
„ „ Supplies of Disinfectants specially on account of Infectious Disease	73
„ „ Houses fumigated after Infectious Disease	23
„ „ „ „ „ deaths from Phthisis.....	4
„ „ Cases removed to Isolation Hospital	8
„ „ Contacts removed to Temporary Shelter	0
„ „ Beds disinfected by steam	40
„ „ Pillows disinfected by steam	68
„ „ Blankets and Counterpanes disinfected by steam...	44
„ „ Carpets disinfected by steam	6
„ „ Articles of Clothing disinfected by steam	396
„ „ Canal Boats inspected	31

Number of Samples taken under the Sale of Food and Drugs Act, etc., submitted to the Borough Analyst ...	10
„ „ Persons proceeded against for offences under the Sale of Food and Drugs Act	0
„ „ Persons proceeded against under the Contagious Diseases Animals Acts	0

Diseased, Unsound, or Unwholesome food seized, and destroyed by Magistrates' Order:—

Food submitted for inspection and destroyed:—

21½ lbs. Mutton, and owner prosecuted.

1,280 lbs. of Beef.

24 lbs. of Veal.

Number of Licenses granted for the removal of Swine	79
„ „ Notices issued for the detention of Swine	0

I remain, Sir,

Your obedient Servant,

WILLIAM JENKINS.

Health Office,

Town Hall,

Macclesfield.

SIR,

I beg respectfully to submit to you the following as a summary of work done by this department during the year ending 31st December, 1903.

Number of Complaints received at Office	452
„ „ Nuisances entered on the Books	747
„ „ Nuisances removed	799
„ „ Preliminary Notices and Letters	646
„ „ Statutory Notices served	29
„ „ Magistrates' Orders obtained	3

Number of Persons summoned before the Justices for offences		
	under the Public Health Act	5
„	„ Privies and Ashpits repaired and improved	55
„	„ Privies converted into Water-closets	136
„	„ New Closets built :—	
	On W.C. system	37
	On Waste Water system	0
	On Privy system	2
„	„ House drains repaired and cleased	184
„	„ Slopstone Pipes disconnected from the sewer.....	12
„	„ House Drains tested with Smoke Apparatus	119
„	„ Other Nuisances (not specified above) abated	45
„	„ Visits paid to Common Lodging-houses	399
„	„ Nightly lodgers accommodated at the Common Lodging-houses during the year	31,406
„	„ Visits paid to Factories and Workshops	24
„	„ „ „ „ Dairies, Cowsheds and Milkshops ...	206
„	„ „ „ „ Registered Slaughter Houses	358
„	„ „ „ „ Bakehouses	127
„	„ „ „ „ Tripe-dressing places	78
„	„ „ „ „ Dirty and Overcrowded Houses	326
„	„ Houses inspected in Sanitary Survey	87

The distribution of Lime-wash, Brushes, and Disinfectants to the Poor has been as follows :—

Lime-wash	1,130
Brushes lent for applying same	580
Disinfectants	6,801

Number of Houses specially inspected on account of Infectious		
	Diseases	274
„	„ Visits paid to same	792
„	„ Notices sent to schools and parents re the Isolation of children where infectious disease exists	668
„	„ Pails containing Typhoid excrement, removed, dis- infected and buried	93
„	„ Supplies of Disinfectants specially on account of Infectious Disease	349
„	„ Houses fumigated after Infectious Disease	195
„	„ „ „ „ „ deaths from Phthisis.....	6

Number of Cases removed to Isolation Hospital	128
„ „ Contacts removed to Temporary Shelter	28
„ „ Beds disinfected by steam	187
„ „ Pillows disinfected by steam	358
„ „ Blankets and Counterpanes disinfected by steam...	263
„ „ Carpets disinfected by steam	102
„ „ Articles of Clothing disinfected by steam	4,628
„ „ Canal Boats inspected	66
„ „ Samples taken under the Sale of Food and Drugs Act, etc., submitted to the Borough Analyst ...	37
„ „ Persons proceeded against for offences under the Sale of Food and Drugs Act	1
„ „ Persons proceeded against under the Contagious Diseases Animals Acts	0

Diseased, Unsound, or Unwholesome food seized, and destroyed
by Magistrates' Order:—

476 lbs. of Beef, and owner prosecuted.

21½ lbs. of Mutton, and owner prosecuted.

Food submitted for inspection and destroyed:—

2,400 lbs. of Beef.

24 lbs. of Veal.

Number of Licenses granted for the removal of Swine	376
„ „ Notices issued for the detention of Swine	0

I remain, Sir,

Your obedient Servant,

WILLIAM JENKINS.

TABLE I.
Name of District Macclesfield. For Whole District.

Year.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES, TOTAL.		Deaths in Public Institutions	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES, NETT.	
		Number.	Rate*	Number.	Rate per 1000 Births registered.	Number.	Rate*				Number.	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1891	36009	1009	28.1	130	130	816	22.6	135	67		749	20.8
1892	36009	989	27.4	201	203	986	27.3	156	81		905	25.1
1893	36009	931	25.9	177	190	845	23.4	191	101		744	20.6
1894	36009	1017	28.2	136	134	732	20.3	160	89		643	17.7
1895	36009	917	25.4	199	217	908	25.2	182	95		813	22.5
1896	36009	964	26.8	150	55	732	20.3	150	67		665	18.4
1897	36009	977	27.1	171	175	825	22.9	179	93	2	734	20.3
1898	36009	953	26.1	166	174	787	21.0	151	88	1	670	18.6
1899	36009	886	24.6	174	196	810	22.5	188	73		737	20.4
1900	36009	853	23.6	163	190	772	21.4	180	66	3	709	19.7
Averages for years 1900—1901	36009		26.6		174		22.9	163	82			
1901	34635	771	22.2	139	180	720	20.8	176	77	3	643	18.5
1902	34635	842	21.4	76	102	597	17.2	175	72	2	525	15.1
1903	34624	870	25.1	117	134	675	19.4	204	74	2	601	17.3

* Rates calculated per 1,000 of estimated population.

NOTE. The deaths to be included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water)	.....3214.	} At Census of 1901.
Total population at all ages	34,624	
Number of inhabited houses.....		
Average number of persons per house		

TABLE II.

Name of District Macclesfield.

Names of Localities.	West Macclesfield.				East Macclesfield including Hurdsville since 1896.				Hurdsville.				Sutton.			
	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year
Year,	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1891	17854	447	398	61	9813	293	204	49	3282	111	44	3	5060	158	103	17
1892	17854	437	472	84	9813	298	213	64	3282	110	74	19	5060	144	146	34
1893	17854	427	415	74	9813	257	185	68	3282	111	57	17	5060	136	87	18
1894	17854	471	332	49	9813	284	160	49	3282	90	53	15	5060	166	98	20
1895	17854	433	421	98	9813	276	213	17	3282	74	67	15	5060	154	112	29
1896	17854	441	352	61	13095	375	242	67					5051	149	71	22
1897	17854	472	382	61	13095	378	261	71					5051	127	91	27
1898	17854	422	369	85	13095	383	225	61					5051	148	76	20
1899	17854	417	422	90	13095	341	213	57					5051	128	102	23
1900	17854	429	398	72	13095	305	224	68					5051	119	99	23
Averages of Years 1891 to 1902 ...	17854	442	387	75		495	251	68						146	99	23
1901	17297	365	326	68	12450	283	214	44					4888	123	103	27
1902	17297	350	270	39	12450	300	196	31					4888	92	59	6
1903	17297	399	307	44	12440	357	240	61					4887	144	54	12

NOTES.—(a) The separate localities adopted for this table should be areas of which the populations are obtainable from the census returns, such as wards, parishes, or groups of parishes, or registration sub-districts. Block 1 may, if desired, be used for the whole district; and blocks 2, 3, etc., for the several localities. In small districts without recognised divisions of known population this Table need not be filled up.

(b) Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns C of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table I. as to meaning of terms “resident” and “non-resident.”)

(c) Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities according to the addresses of the deceased.

(d) Care should be taken that the gross totals of the several columns in this Table respectively equal the corresponding totals for the whole districts in Tables I. and IV.; thus, the totals of sub-column A, B, and C should agree with the figures for the year in the columns 2, 3, and 12, respectively, of Table I.; the gross total of the sub-columns C should agree with the total of column 2 in Table IV., and the gross total of sub-columns D with the figure in column 5 of Table I., and the total of column 3 in Table IV.

TABLE III.
Cases of Infectious Disease notified during the year 1903.

Notifiable Diseases.	Cases Notified in Whole District.							Total Notified in each Locality.			No. of Cases removed to hospital from each locality		
	At all Ages.	At Ages†—Years.						West Macclesfield	East Macclesfield	Sutton.	West Macclesfield	East Macclesfield	Sutton
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards						
Smallpox	20	...	...	...	4	15	1	6	14	..	6	14	...
Cholera	...	...	...	...	...	...	...	...	...	..	...	...	...
Diphtheria	20	...	4	9	1	6	...	11	8	1	5	2	...
Erysipelas	28	1	...	4	2	19	2	14	7	7	...	...	...
Scarlet Fever	141	...	37	88	14	2	...	77	49	15	54	35	12
Enteric Fever	21	...	1	3	4	13	...	12	5	4	32	12	...
Puerperal Fever	4	...	...	...	1	3	...	3	1	...	2	...	...
Chicken Pox	48	2	14	32	...	...	...	16	27	3	...	...	...
Totals	282	3	56	136	26	58	3	141	111	35	65	51	12

NOTES.—The localities adopted for this table should be the same as those in Tables II. and IV.

State in space below the name of the isolation hospital, if any, to which residents in the district, suffering from infectious disease, are usually sent. Mark (H) the locality in which it is situated, or if not within the district, state where it is situated, and in what district. Mark the locality in which a workhouse is situated.

* This space may be used for the record of other disease the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

Isolation Hospitals for Scarletina, Diphtheria, &c., and a separate building for Small-pox, situated in West Macclesfield.

TABLE IV.
Causes of, and Ages at, Death during Year 1903.
MACCLESFIELD DISTRICT.

Causes of Death.	Death in whole District at subjoined ages.						Death in Localities (at all ages.)				Deaths in Public Institutions
	All ages	Under 1	1 & under 5	5 & und'r 15	15 & un. 25	25 & un. 65	65 & up.	West	East	Sutton	
Small-pox	2	1	...	...	...	...	1	...	2	...	2
Scarlet Fever	9	...	4	5	...	...	...	7	2	...	9
Whooping Cough	1	..	1	...	..	...	...	...	...	...	...
Diptheria & Membranous Croup	3	...	2	1	...	..	...	...	3	...	1
Enteric Fever	3	...	...	...	1	2	...	2	1	...	...
Epidemic Influenza	6	...	...	1	1	1	3	2	3	1	2
Diarrhœa	15	11	3	...	...	...	1	4	10	1	1
Enteritis	3	1	1	...	1	...	...	1	2	...	4
Puerperal Fever	1	...	...	...	...	1	...	1	...	...	...
Erysipelas	2	1	...	...	...	1	...	1	...	...	...
Other Septic Diseases	7	2	...	1	...	2	2	5	2	...	5
Phthisis	42	..	...	2	10	27	3	21	16	5	24
Other Tubercular Diseases	18	7	4	4	1	2	...	5	8	5	3
Cancer, Malignant Disease	36	...	1	...	1	24	10	23	10	3	10
Bronchitis	42	13	3	1	1	7	17	14	25	3	4
Pneumonia	28	7	4	3	...	12	2	12	13	3	8
Other Diseases of the Respiratory Organs ..	4	...	1	...	...	2	1	2	2	...	2
Alcoholism Cirrhosis of Liver } ...	10	...	...	...	...	9	1	4	5	1	1
Venereal Diseases	13	12	...	...	...	1	...	5	7	1	4
Premature Birth	22	22	...	...	...	...	..	10	7	5	1
Diseases and Accidents of Parturition	4	...	...	...	1	3	...	3	1	...	...
Heart Diseases	75	...	1	1	3	43	27	40	31	4	20
Accidents	7	1	2	3	...	1	...	2	3	2	6
Suicides	3	...	...	...	...	2	1	3	...	4	2
Convulsions & Apoplexy	52	17	3	...	...	15	17	26	23	3	6
Insanity and other Brain Diseases	22	2	...	1	...	14	5	25	5	4	32
Bright's Disease	26	...	1	...	1	14	10	12	10	4	8
Rheumatic Fever	2	...	...	1	...	1	...	2	0	...	20
Marasmus	9	9	...	...	...	...	...	6	3	...	2
Senile Atrophy	97	...	...	...	...	3	94	59	30	8	27
Other Causes	37	11	1	...	3	15	7	20	14	3	81
All Causes	601	117	32	24	24	201	203	307	240	54	204

